DOCUMENT RESUME

ED 206 896 CE 030 045

TITLE	Documentation of Assessment Systems Used By Prime Sponsors in the Evaluation of Training and Educational Attainment of Program Participants (Priority 6).
INSTITUTION	Virginia Polytechnic Inst. and State Univ., Reston.
SPONS AGENCY	Governor's Employment and Training Council, Richmond, Va.; Virginia State Governor's Office, Richmond.
PUB DATE	31 Oct 80
NOTE	214p.; For related documents see ED 189 328-329.
EDRS PRICE	MF01/PC09 Plus Postage.
DESCRIPTORS	Educational Cooperation; *Employment Programs; Evaluation Methods; Federal Legislation; *Federal Programs; Human Resources; Information Sources; *Job Training; *Models; Postsecondary Education; Pretesting; Screening Tests; Standardized Tests; Testing Programs; Test Selection
IDENTIFIERS	*Comprehensive Employment and Training Act; *Virginia

ABSTRACT

To improve Comprehensive Employment and Training Act (CETA) participant assessment systems in Virginia, a project identified assessment systems and techniques/tools used by prime sponsors and developed an assessment model. It also identified key personnel of educational institutions in the prime sponsor area. A mail survey was followed by on-site interviews at each prime sponsor organization. Specialists in assessment and testing at two- and four-year educational institutions were identified and included in a listing of resource persons for prime sponsors. Analysis of interview data focused on identifying the assessment system and tools used. Following the project narrative, chapter 4 addresses test selection. It defines and classifies standardized test, examines basic principles in test selection and potential sources of information about specific tests, and explores alternative assessment techniques. Chapter 5 presents a model of the recommended assessment system with five components: outreach, intake/eligibility determination, pre-program assessment, on-going assessment, and post-program assessment. Each component is described in the form of recommendations for actions. Appendixes, amounting to approximately one-half of the document, include assessment program summaries, list of educational institutions and assessment contacts, list of individual test reviews, and lists of test publishers, references on testing, and general references. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED206896

DOCUMENTATION OF ASSESSMENT SYSTEMS USED BY PRIME SPONSORS IN THE EVALUATION OF TRAINING AND EDUCATIONAL ATTAINMENT OF PROGRAM PARTICIPANTS (PRIORITY 6)

Submitted to: Governor's Employment and Training Council (Virginia)

Submitted by: Virginia Polytechnic Institute and State University

Director: Max S. Wortman, Jr.
Department of Management
College of Business

Co-Director: Jerald F. Robinson
Department of Management
College of Business

Co-Director: Robert L. McGough
Division of Vocational Technical Education
College of Education

Project Supervisor: John R. Endahl
(9/1/80-9/30/80)
Department of Management
College of Business

Project Supervisor: Patricia Compton Forbes
(10/1/79-8/31/80)
Department of Management
College of Business

October 31, 1980

CE 030 045

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

G. Scherer

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ACKNOWLEDGEMENTS

We wish to thank the following people for their cooperation and efforts in accomplishing the tasks outlined in this research project.

A. The prime sponsors in the Commonwealth of Virginia. These members were quite cooperative in helping this research team complete its objective.

B. The people at the Northern Virginia Skills Center who were so gracious in allowing us to tour their facilities.

C. The local education agencies, skills centers and community colleges who were more than willing to take the time to respond to our resquests.

D. The government agencies in the Commonwealth of Virginia who aided these research efforts.

E. Candace Irwin, Chorng-quong King, Donald Drost, and Paul Swiercz who served as research assistants and research associates during this project.

F. John R. Endahl, the present project supervisor, and Patricia Compton Forbes, the past project supervisor.

G. Last, we wish to express our thanks to our secretaries (Cheryl Faso, Elizabeth Hill, Marji Clark, Debra Carver, Dawn Hatcher, and Teresa Linkinoggor) who consistently retyped our corrections. Their persistence and diligence will always be respected and appreciated.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

LIST OF TABLES iii

LIST OF FIGURES iii

Chapter

1. GENERAL BACKGROUND INFORMATION 1

INTRODUCTION AND PROBLEM STATEMENT 1

OBJECTIVES 4

DEFINITIONS 4

LITERATURE REVIEW 8

Pre-program assessment methods 10

Ongoing assessment methods 16

Post-program assessment methods 17

Choosing CETA-participant assessment methods 20

2. RESEARCH METHODOLOGY 24

INTRODUCTION 24

PROJECTED METHODS 24

SURVEY UTILIZED 25

SUMMARY 27

3. ANALYSIS OF DATA 29

OVERVIEW OF PRIME SPONSOR ASSESSMENT PROGRAMS 29

Intake 31

Pre-program assessment 31

Page

Pre-training screening 31

Ongoing assessment 32

Post-program assessment 32

INTAKE 34

Site of intake services 34

General observations 36

PRE-PROGRAM ASSESSMENT 37

General observations 40

ONGOING ASSESSMENT 44

Educational institution activities 44

Placement agency activities 46

POST-PROGRAM ASSESSMENT 48

4. TEST SELECTION 51

INTRODUCTION 51

DEFINITION AND CLASSIFICATION OF STANDARDIZED TESTS 51

BASIC PRINCIPLES IN TEST SELECTION 53

SOURCES OF TESTING INFORMATION 61

USES AND MISUSES OF STANDARDIZED TESTS 63

Aptitude tests 64

Achievement tests 67

Interest inventories 68

Personality tests 70

Work samples 71

SUMMARY 72

Page

5. RECOMMENDATIONS 75

INTRODUCTION 75

OVERALL ASSESSMENT MODEL 75

OUTREACH 81

INTAKE/ELIGIBILITY DETERMINATION 82

PRE-PROGRAM ASSESSMENT 84

ONGOING ASSESSMENT 88

POST-PROGRAM ASSESSMENT 90

GENERAL/MISCELLANEOUS ASSESSMENT ISSUES 92

APPENDIXES

A. MANAGEMENT PLAN AND SCHEDULE A-1

B. PERSONNEL CONTACTED AND INTERVIEWED B-1

C. SUMMARIES OF PRIME SPONSOR'S ASSESSMENT PROGRAMS C-1

D. LIST OF EDUCATIONAL INSTITUTIONS AND ASSESSMENT CONTACTS . . D-1

E. SELECTIVE LIST OF TEST PUBLISHERS E-1

F. INDIVIDUAL TEST REVIEWS F-1

G. SELECTED REFERENCES ON TESTING G-1

H. BIBLIOGRAPHY H-1

LIST OF TABLES

Table		Page
1.	Overview of Prime Sponsor Assessment Programs	30

LIST OF FIGURES

Figure		Page
1.	Recommended Overall Assessment Model	77
2.	Pre-Program Assessment (Component C)	78
3.	Ongoing Assessment (Component D)	79
4.	Post-Program Assessment (Component E)	80

Chapter 1

GENERAL BACKGROUND INFORMATION

INTRODUCTION AND PROBLEM STATEMENT

Since the passage of the Employment Act of 1946, the federal government has formally adopted policies and programs to achieve high levels of employment in the nation. Three legislative acts of an "employment" nature preceded the Employment Act: the Wagner-Peyser Act (1933), which established the federal-state Employment Service system; the Fitzgerald Act (1937) which established a national apprenticeship policy; and the Federal Insurance Contributions Act (1935) which authorized the unemployment insurance system and provided the funding bases for Employment Service operations.

Since 1946, Congress has enacted numerous measures to further the employment ideal. Three major acts in this legislative stream have been the Manpower Development and Training Act (1962) which provided occupational and skill training, manpower research, experimental and demonstration programs, and related manpower services; the Economic Opportunity Act (1964) which provided employment and training opportunities for the poor; and the Comprehensive Employment and Training Act (1973) as amended.

Present federal government employment and training policy has two basic goals: (1) national economic stability and growth and (2) full development of our human resources by assisting individuals--particularly

the poor and the disadvantaged - in their adaptation to the world of work and in the fulfillment of their employment potential.

The goal of greater real economic growth in the 1980's (Goal 1) depends on fuller development of our human resources (Goal 2). Thus, a basic issue revolves around improving the human resource development system. Over the past eighteen years, numerous evaluations of employment and training programs have concentrated primarily on estimating the aggregate impact of the individual program. There have not been such concentrated efforts in: (1) comparing the relative merits of different types of training with the same end product (classroom training v. work experience training); (2) measuring the relative effectiveness of different vendors of similar services (OIC v. Urban League); or (3) examining the effects of supplying slightly different services within a given program (different teaching materials for classroom training).

All types of evaluation conducted since 1962 have required extensive data on large scale samples of participants, if they were to be meaningful and statistically valid. Thus, these evaluation projects were quite expensive and time consuming. On the one hand, few prime sponsors have had the financial resources to fund the sampling of hundreds of observations necessary to assess each program properly (assuming former clients can now even be located). On the other hand, since prime sponsors normally must make budget allocation decisions annually, they have not been sympathetic to two, three, or five year delays after a service has been provided to determine what degree of impact had been provided by the program.

Another type of evaluation is equally important for benefit of the prime sponsor, specifically, the assessment system operating within the prime sponsor's organization. This project concentrated on these assessment processes, the assessment techniques utilized, and the various assessment tools available.

A timely study of assessment systems utilized in the Commonwealth of Virginia would accomplish several tasks which are necessary pre-conditions for the improvement of the human resource development system under CETA (Goal 2 above). These tasks would include at least the following:

a. The identification of participant assessment systems utilized by prime sponsors in the Commonwealth;

b. The discovery of what types of agencies, institutions, and other organizations provide and administer these assessment functions; and

c. The enumeration of problems encountered and solutions attempted in participant assessment in the various types of employment and training programs.

Once these tasks have been completed, it should be possible to look at methods of improvement in the participant assessment process. Prime sponsors as well as educational institutions and other sub-contractors should be able to consider alternative improvement methods in their system to make them more effective.

OBJECTIVES

Recognizing that greater real economic growth depends on improving the human resource development system under CETA, this project has had four major objectives aimed at improving the CETA participant assessment systems in the Commonwealth.

The first objective has been one of identification: to identify the assessment systems and the techniques/tools used by prime sponsors in the Commonwealth to evaluate their own program participants.

The second objective was basically the provisions of recommendation: to recommend improvements in the assessment systems presently in use.

A third objective has been the development of a model of participant assessment which should enable prime sponsors to compare their own systems to the "ideal."

A final objective has been to identify key personnel of educational institutions located in the prime sponsor area in order to strengthen CETA/educational linkages in the assessment area.

DEFINITIONS

As the project progressed, it became evident that definitional problems were a barrier to the project. Thus, key terms were identified and operational definitions specified. The reader is strongly urged to read each definition before proceeding to other parts of the Report. The definitions are not arranged alphabetically, but are arranged developmentally.

A. PRIME SPONSOR - U.S. Department of Labor designated local organization which is responsible and accountable for the planning, administration and delivery of CETA programs. In Virginia,

there are nine prime sponsors plus the Balance of State prime sponsor.

B. BALANCE OF STATE PRIME SPONSOR (BOS) - U.S. Department of Labor designated organization which is responsible and accountable for the planning, administration and delivery of CETA programs in all areas of a given state not covered by a local prime sponsor. In Virginia, the Balance of State prime sponsor has entered into an agreement with the Virginia Employment Commission for the VEC to act as intake office for all BOS applicants and also to assume responsibility of all assessment activities. There are five (5) BOS regional operations centers (ROC) with a primary function of liason with sub-contractors.

C. CLIENT (often used synonymously with the terms applicant, participant, student, or enrollee) - a person who has applied to a prime sponsor for training via the intake office and may be at various stages of the training program, the principal person upon which the assessment process is focused.

D. SUBCONTRACTOR - any organization with which a prime sponsor contracts for purposes of providing an employment and training service; most training programs are operated by a subcontractor rather than by a prime sponsor; may be subdivided into three main categories of Virginia subcontractors: VEC, community-based organization, or educational institution.

E. EMPLOYMENT SERVICE - a state office of the U.S. Employment Service; in Virginia, refers to the Virginia Employment Commission (VEC); usually acting in the role of subcontractor in providing specialized employment and training services for a client or for a prime sponsor.

F. COMMUNITY-BASED ORGANIZATION - a private nonprofit organization which is representative of a community or a significant segment of a community and which provides employment and training services typically as a subcontractor for a prime sponsor (examples: Opportunities Industrialization Centers (OIC), Urban League, United Way, Community Action Agencies).

G. EDUCATIONAL INSTITUTION - any organization with a primary objective of providing employment and training services to clients; may be a public or private "school", ranging from a cosmetology school to a public school or college.

H. INSTITUTION OF HIGHER EDUCATION - means those institutions defined as institutions of higher education in section 1201(a) of the Higher Education Act of 1965; in Virginia, refers to colleges and universities domiciled in state as well as units of the Virginia Community College System.

I. INTAKE - any process which controls the flow of enrollees into a program activity in an effort to maintain enrollment levels; intake criteria determine who will receive services. Presently a standardized intake (registration) form is to be used as part of the CETA Management Information System (MIS) in the Commonwealth.

J. ASSESSMENT - the process that determines selectively which applicants are to comprise the flow of enrollees to specify training opportunities; it is the assessment mechanism which determines what employment and training services are to be provided to an individual client.

K. ASSESSMENT TECHNIQUES (also referred to as assessment methods) - those types of processes which employment and training professionals may use to make assessment decisions with clients; (Examples: counseling, testing, interviews, biographical case studies, observation, etc.).

L. ASSESSMENT TOOLS - a specific type of assessment technique/ method; whereas testing is a technique, the GATB or the Minnesota Vocational Interest Inventory is a tool.

M. PRE-PROGRAM ASSESSMENT - that collection of assessment techniques which are utilized prior to assignment of client to a training program; this is designed to assure that client and training program are properly matched.

N. EMPLOYABILITY DEVELOPMENT PLAN (EDP) - a document completed for each client containing background information on the client, summary of interview and test results, listing of client barriers to employment and recommended actions, and a transition plan (also referred to as an employee development plan).

O. ONGOING ASSESSMENT - the prime sponsor and/or the subcontractor may continue the assessment process after a client commences training to the time training is completed; such assessment during the training is termed ongoing.

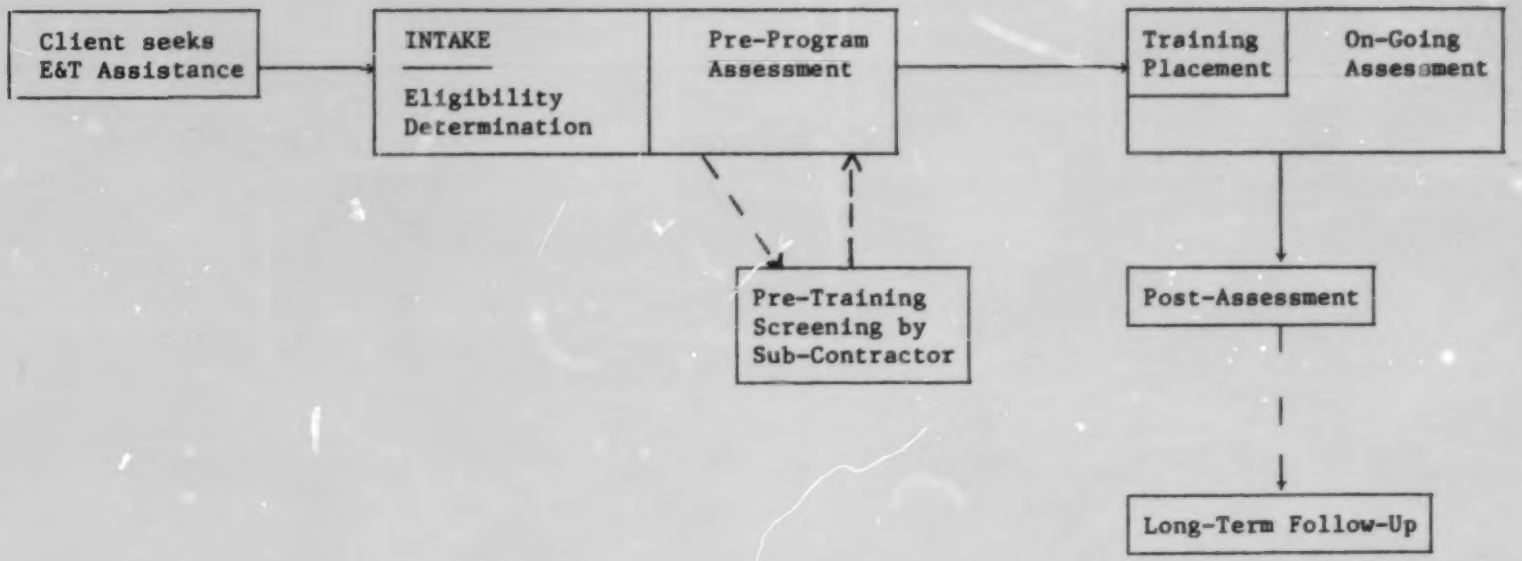
P. POST-PROGRAM ASSESSMENT - after a client completes a training program, the prime sponsor and perhaps the subcontractor seeks to determine the success of the learning experience via alternative techniques; post assessment occurs after training is completed.

LITERATURE REVIEW

Client assessment is a term widely used throughout the fields of education and training necessitating clarification of their meaning with respect to CETA programs. Intake may be defined as "any process that controls the flow of enrollees into a program activity--such as work experience or classroom training--at a rate that maintains optimal enrollment levels" (ETA, 1978b, p. 1). Assessment refers to "the process that determines selectively which applicants are to comprise that flow of enrollees" (ETA, 1978b, p. 1).

Intake and assessment may be viewed as an integrated process which determines respectively, who qualifies for services and exactly what those services will be. While intake and assessment may be thought of generally as the continous application process for clients, it may also serve as a means of career enlightenment as clients are exposed to career opportunities they may not have previously considered. Ultimately, intake and assessment identify qualified clients for the various programs available from the prime sponsor.

In order to establish consistent, comprehensive results in participant assessment, most prime sponsors use a system which employs distinct assessment categories: (1) pre-program assessment, (2) ongoing assessment, and (3) post-program assessment. The relationship between the intake and the three categories of assessment are shown in the figure on the next page.


Client seeks E&T Assistance
INTAKE
Eligibility Determination
Pre-Program Assessment
Training Placement
On-Going Assessment
Pre-Training Screening by Sub-Contractor
Post-Assessment
Long-Term Follow-Up

Pre-Program Assessment Methods

Counseling. Within the context of intake and assessment, and subsequent referral activity, counseling is at the foundation of employability services.

Emplcyment counseling is designed to assist applicants encountering problems of vocational choice, vocational change, and adjustment to a current job. The various assessment techniques employed by counselors include testing, group guidance methods, labor market information, and occupationally specific information. Applicants of all ages, racial backgrounds and education and training levels are served by counselors, in addition to occasional mentally and/or physically handicapped applicants. Three basic problems inherent in providing such counseling services are: "(1) finding an agency or individual who can accomplish these objectives, (2) developing methods for monitoring and evaluating the counseling function, and (3) securing tangible evidence of accomplishment in the evaluation process" (ETA, 1978d, p. 9).

Testing. Tests are generally of three types: (1) "paper and pencil", (2) projective, and (3) work sample.

Paper and pencil tests. These cognitive aptitude and ability tests, are, perhaps, the most commonly used, although they create considerable anxiety for many applicants who have a history of poor performance on similar objective classroom tests. Moreover, performance on paper and pencil tests may vary by situation, group influence, perceived role conflict or ambiguity, peer pressure, reward structure, etc. Often, tests project cultural bias or present information about which applicants are unfamiliar. Moreover, some tests simply do not

measure characteristics which are relevant to the types of jobs for which applicants apply. On the positive side, paper and pencil tests are easily administered, and standardized procedures are common to virtually all clients. They can be quite inexpensive when purchased and used in quantity and may be machine graded for accuracy.

Occupational aptitude testing plays an integral part in assessment of CETA applicants for training and employment. Tests used are directly related to vocational assessment, employability development, training, selection, and job placement. Several of the most frequently used cognitive aptitude and ability tests are described in the following paragraphs.

The California Achievement Test (CAT) is a paper and pencil test which measures individual achievement on arithmetic, reading, and vocabulary. The CAT is amenable to group administration lending a fairly high level of utility; however, the norms established for the test are at least 12 years old.

The General Aptitude Test Battery (GATB) is an aptitude test which measures a wide variety of individual traits for persons who have had at least some high school (i.e., between the 10th and 12th grade levels). The various traits measured include clerical perception, finger dexterity, form perception, general learning ability, manual dexterity, motor coordination, numerical ability, spacial aptitude, and verbal ability. Created by the U.S. Employment Service, the GATB has been used extensively in CETA assessment programs.

A special adaptation of the GATB is the Non-reading Aptitude Test Battery (NATB) used with applicants whose reading skills are

somewhat limited. Many data on this test are not yet available, although preliminary results are encouraging.

Other paper and pencil tests which typically measure aptitude or achievement include, but are not limited to, the Kuder Occupational Interest Survey, the Strong Vocational Interest Blank and the Basic Occupational Literacy Test. A more complete listing may be found in Appendix F.

Projective tests. In contrast to the objective tests, projective methods "denote the process by which the characteristics of the individual --his personality structure--influence the ways in which he perceives, organizes, and interprets his environment and experiences" (Brown, 1970, p. 393). The person administering a projective test, in essence, attempts to guess what the applicant is thinking. For those situations in which applicants may prove to be severely disadvantaged, projective tests utilizing pictures may elicit applicant responses relevant to the job of the person in the picture. This test, Self-Concepts Proficiency, requires the services of a clinically trained psychologist to interpret results and because of the attendant costs, is of limited usefulness-- a disadvantage common to most projective techniques.

Of the varous projective tests, the 550 item Minnesota Multiphasic Personality Inventory is perhaps the best known and most widely used. Administered in industry, corrections facilities, and psychiatric clinical settings, the MMPI identifies deviant behavior discriminating between the various degrees of emotional stability for persons with at least an eighth grade reading level. A distinct advantage of the MMPI is its "built-in" detection of suppressed or misinterpreted responses by the applicant. Obvious disadvantages are length of testing, difficulty in

interpretation, skill required for administration, need for a clinical environment, and attendant costs. Like most tests, the MMPI should not provide the sole selection criteria, but should number among all available assessment techniques in the applicant selection decision. Additional examples of projective tests may also be found in Appendix F.

Work samples of performance. Currently enjoying greatest popularity among assessment techniques being used today, the work sample or work simulation attempts to relate performance for tasks to realistic job-behavior measures. Prime sponsors attempt to provide samples of work directly related to the work required of a certain job or family of jobs. The applicant's performance on work samples would be expected to be predictive of actual job performance.

The major disadvantage to the use of work samples is that of economic feasibility. An assessment "center," or laboratory setting is required in order to make administration valid, reliable, and affordable. Achieving consensus on the appropriate work samples would be unlikely even on a regional basis, given the diversity of jobs within CETA's perview. When employed on a time-sharing basis, assessment centers still are beyond the financial reach of most prime sponsor's budgets. This method avoids many of the problems that plague other assessment techniques such as cultural bias and measurement of skills irrelevant to actual job performance. It enjoys significant face and content validity for the prime sponsor, applicant, and test administrator. Of particular importance, work samples provide a demonstration effect for applicants, exposing them to jobs with which they have little or no experience and providing them with insights as to possible career and occupational opportunities.

Interviewing. Interview techniques to develop client assessments are equally as important as testing programs. It should be emphasized that counselors use formal assessments (e.g., tests) only as one substantive area to be considered in evaluating clients.

An interview is typically conducted for all candidates, and may be either structured or unstructured. The distinction between these interview schedules lies in the extent to which they are standardized and valid. In a structured interview, the order of questions, the questions themselves, and the working of the questions are fixed and they are administered uniformly to clients in a way such that method validity is enhanced. The unstructured interview schedule is more flexible. The interviewer determines the order of questions, the questions themselves, and the wording of the questions. This reduces method validity since not all clients are bound to be treated uniformly. While spontaneity may be valuable in securing additional information, it may also enhance method bias. This more personalized interaction between interviewer and interviewee may enhance the possiblity of "halo" effects, creating differential treatment of clients. Probably the best method would be to employ a semi-structured interview that would allow the interviewer some flexibility in administration. Given the diversity of cultural, ethnic, and educational backgrounds of clients, an experienced interviewer may be more effective in securing information with some "built in" openness and flexibility. There is no substitute for experience in interviewing. The most psychometrically precise and professionally designed interview schedule is of little value unless qualified, experienced interviewers administer them. Periodically, interviewers should attempt to cross-

validate their interview techniques by composing their findings with objective colleagues who observe the interviewer. This exercise may help even the most experienced interviewers overcome personal bias in interviewing techniques.

Case Study. Biographical information provides the prime sponsor with data on a client's past behavior which will, in turn, allow for the prediction of the client's future performance. For example, a record of honorable employment in former jobs may lead to the expectation that a client is a good risk in referral. The major instrument used in this regard is the Biographical Information Blank (BIB). Of particular importance, the BIB, covers personality dimensions such as present values, attitudes, interests, opinions, and preferences, allowing for the prediction of future performances from present behavior, as well.

Information secured by the BIB is particularly valuable as it is generally information which can be verified in most cases. Independent studies have demonstrated a very high correlation (generally exceeding .90) between reported biographical information provided by clients, and information secured through investigation to verify client's claims. Thus the determination of the variables used to classify clients should be of a verifiable nature, if the BIB or other biographical instruments are to provide predictive validity. The BIB has demonstrated excellent reliability, as well. Its successful application by State Employment Security Agencies and the Job Corps are testament to its applicability in CETA programs as an assessment tool.

Observation. Observation may play a part in the assessment process; however, even the best trained observer may find it difficult to distinguish between client behaviors when exposure to the client is of short duration. Moreover, situational variables may cause the client to behave in a fashion inconsistent with his or her normal patterns of behavior. Armed with this knowledge, information gathered by observational methods should be tempered by consideration of all assessment techniques taken as a whole. Observation may be helpful in determining overt behavior exhibiting the client's extent of cooperativeness, independence, alertness, and any number of behavioral dimensions which result from the observer's exposure to the client in mixed settings over several observation episodes. It is not enough to make judgmental evaluations on a short term basis. Consistency in behavior must be the focus of the observer's assessment.

Ongoing Assessment Methods

Once the client's preassessment is completed, there may also be some pre-training screening by the subcontractor who will be responsible for the scheduled training. After the client is placed in a training program, the ongoing assessment is typically shared by both the prime sponsor and the training subcontractor. The prime sponsor's counselor, usually the developer of the transition plan in the EDP, will remain in contact with the client, even if only informally (on call). In the more successful programs nationally, this link is a strong one and a close client/counselor relationship exists throughout the program. Weekly or bi-weekly meetings on clients in each training program may

be held on a group basis. Periodic employability meetings are also held jointly with counselor, client and instructor; these typically are held two or three times during training.

The subcontractor's instructors generally perform regular or ongoing assessment of the client's performance--largely in terms of mastery of course content and client skill acquisition. Ideally written appraisals are developed for the client and the counselor. In most cases, however, the instructor has wide discretion in how to assess and whether to produce written documentation. In those training programs with smaller classes, it is likely that informal assessment techniques can be useful since the instructor spends six to eight hours per day with a small number of clients. However, in larger classes, more formal techniques are desirable, although not commonly available.

The system of shared assessment responsibility is not universally adopted. The responsibility may be solely that of the prime sponsor or more likely that of the subcontractor. Very few research findings dealing with ongoing client assessment are available and this appears to be a promising area for further investigation.

Post-Program Assessment Methods

Monitoring. Monitoring is very important when dealing with on-the-job training. Unless the prime sponsor receives periodic feedback, it will not be possible to determine whether or not the program is successful. The most effective method of monitoring a program is to devise a checklist of the program's goals. The prime sponsor would then periodically visit the job, filling out the checklist. Care must be taken that the client not be interrupted at his job during these check-ups (ETA, 1978c).

Interviews, simulations, and questionnaires. These methods have also been used in the post-program assessment of participants. They have normally not been validated, and may offer only subjective evaluations.

Indicators. Many have resorted to the use of various indicators for assessing the success of CETA program participant training. This type of assessment method is used since it is relatively simple, results are gathered quickly, and it is cost effective.

Depending upon the specific goals set originally by the prime sponsor, any number of indicators can be used. The most common indicators are:

Placement efficiency. This indicator is a measure of overall effectiveness of CETA as a mechanism for getting people into unsubsidized employment. It is calculated as the number of people entering employment divided by the number of all persons enrolled. The measure indicates what proportion of people who are enrolled end up with a job. This indicator is a crucial test of how well CETA is working in terms of getting people employed.

CETA placement rate. This indicator is a similar kind of measure, but it narrows the focus even more by indicating what proportion of all enrollees get a job after receiving CETA services other than assessment and referral. It is calculated as the number of indirect placements divided by the number of people enrolled.

Indirect placement rate. This indicator is calculated as the number of indirect placements divided by the number of people entering employment. This measure indicates what proportion of the people who got jobs

had received some CETA services other than assessment and referral. This has been one of the national indicators used since FY 76 (ETA, 1978d).

The entered employment rate. This indicates what percentage of the people who leave a CETA program do so because they got a job. It is computed by dividing the number of people entering employment by the total number of terminations. This has also been a DOL standard indicator since FY 76 (ETA, 1978d).

Nonpositive termination rate. This measure is the number of non-positive terminations divided by the number of total terminations. It indicates the proportion of people who are leaving a CETA program for reasons other than getting a job, going back to school, joining the military, or other "positive" reasons. This has also been a standard indicator since FY 76.

Increased earnings. This is defined as the wage earned prior to CETA training divided by the wage earned after CETA training. Some useful formulas are shown as follows:

$$(1)\ \frac{\text{Post-CETA Wages}}{\text{Pre-CETA Wages}}$$

$$(2)\ \frac{\text{Post-CETA Wages}}{\text{Average Wage of Disadvantaged}}$$

$$(3)\ \frac{\text{Post-CETA Wages}}{\text{Average Wage of All Persons Placed by the ES}}$$

$$(4)\ \frac{\text{Post-CETA Wages}}{\text{Average Wage of Person(s) in Similar Occupations Covered by Unemployment Insurance}}$$

The use of these indicators has been predicted on their being highly correlated with the long-run effects of these programs. Unfortunately, the indicators have not been validated, and there is no evidence of correlation with long-term effects. Previous research studies have concluded that major long-run evaluation should be undertaken by the U.S. Department of Labor to determine the types of programs and economic conditions most beneficial to specific groups of manpower program clients. Attempts could then be made by prime sponsors to match programs and clients at the local level. However, prime sponsors have often chosen the "cream" of the applicants, so that their statistical results will be increased, and their data will be more impressive for the Department of Labor (Borus, 1978, p. 4).

Although valid indicators can be very useful, Buros's 1978 study attempted to determine if any indicators actually measured the long-run effects of manpower programs that would meet prime sponsor's needs for short-term but accurate feedback. The conclusion suggested that most measures are not as good as needed.

Choosing CETA-Participant Assessment Methods

Since the selection of the assessment instrument is based primarily upon the purpose served by the assessment, the explication of goals by the prime sponsor with regard to choice of assessment methods becomes vitally important. From these general guidelines, more specific objectives may be delineated so that assessment outcomes may be measurable. This element of control helps to assure more equitable and uniform procedures in the assessment process.

Following the explication of goals and objectives compatible with the assessment purposes, the validity, reliability and cost effectiveness of each instrument helps the prime sponsor identify those instruments which would be most compatable with the selected objectives.

Equally as important as good assessment tools are those who administer them. The training of qualified personnel in the use of paper and pencil tests and other performance appraisal techniques falls within the discipline of psychometrics, generally at the post graduate level. Moreover, vendors of some of the assessment devices, particularly the work samples, offer training for people purchasing the materials.

Generally, projective tests call for a higher degree of training than other types of tests, such as clinical psychology or psychiatry. In contrast, observers may have only a bachelor's degree in the applied behavioral sciences with some training in observation techniques.

Good interviewing skills require not only appropriate training but a sense of self-evaluativeness, as well. The interviewer-client relationship provides many opportunities for the interviewer to negatively affect the client and the assessment process by imposition of personal bias, attitudes and values on the client. The interviewer's introspective, self-critical nature helps alleviate much of this, but a team approach is probably more effective in avoiding these pitfalls since team members' biases tend to cancel one another. By whatever method employed, the team goal is to argue on overlapping areas, thereby enhancing method validity.

Clearly, valid assessment methods and properly trained personnel are critical in intake and assessment but only to the extent that they

match well with other program components. The major goal is to "provide valid information that is sufficient for clients and program operators to evoke judgments concerning the distribution of services" (ETA, 1978b, p. 9). The services to be provided are the product of a joint effort by the intake and assessment personnel who determine client eligibility and service needs and by the client with whom the responsibility for ultimate career development rests.

References Cited

Buros, M. Indicators of CETA performance. Industrial and Labor Relations Review, 1978, 32 (1), 3-14.

Brown, F.G. Principles of educational and psychological testing. Hinsdale, Illinois: Dryden Press, 1970.

U.S. Department of Labor. Employment and Training Administration. CETA prime sponsor management decisions and program goal achievement (R & D Monograph 56). Washington, D.C.: U.S. Government Printing Office, 1978. (a)

U.S. Department of Labor. Employment and Training Administration. Intake and assessment. Washington, D.C.: U.S. Government Printing Office, 1978. (b)

U.S. Department of Labor. Employment and Training Administration. On-the-job training: CETA program models. Washington, D.C.: U.S. Government Printing Office, 1978. (c)

U.S. Department of Labor. Employment and Training Administration. Supportive services: CETA program models. Washington, D.C.: U.S. Government Printing Office, 1978. (d)

Chapter 2

RESEARCH METHODOLOGY

INTRODUCTION

The evolution and assessment of employment and training services play as integral a part in successful programs as does adequate labor market planning. Ultimately, the success of the assessment system lies in the hands of those who administer it. Thus, it was the prime sponsor which provided the locus for the present study. Since each prime sponsor operation may differ significantly in its practices from other prime sponsors, it was necessary to make contact with each such prime sponsor in the Commonwealth.

PROJECTED METHODS

Following a review of both CETA and non-CETA assessment techniques and tools a survey instrument was designed, according to the management plan, to gather specific information on assessment methods in use in particular evaluation situations. In particular, answers were sought to such questions as:

- What types of assessment systems being used by the prime sponsor and its cooperating agencies.
- What are the prime sponsors' rationale for choosing these systems?
- What changes in the assessment system does the prime sponsor feel are needed?
- What technical assistance does the prime sponsor require in order to upgrade its assessment system?

The prime sponsors were identified and telephone contacts were made following a written explanation of the project to each prime

sponsor. Survey forms were to be distributed by mail with follow-up mailings also planned. Personal interviews, primarily by telephone were used to broaden survey data for selected sites and to provide programmatic, organizational and human interaction data for complete project analysis.

The survey instrument resulted in a primarily open-ended design. Based upon a limited field test by telephone and in person, it was deemed necessary to utilize on site interviews in each prime sponsor location.

SURVEY UTILIZED

During a three month period, four researchers conducted on-site interviews with all prime sponsors and the Balance of State. Prior to the personal interviews, written and telephone contacts were made with prime sponsor organizations. Key staff personnel responsible for intake, assessment and evaluation were identified. These key staff personnel were then contacted and interview dates set.

The field interviewers utilized semi-structured interview schedules which were developed from the previously designed but unused mail instruments. Questions were organized into six major categories: (1) dual assessment and evaluation; (2) assessment and evaluation of participants; (3)assessment and evaluation feedback done by participants; (4) critical analysis of assessment and evaluations procedures; (5) training program assessment methods; and(6) training program assessment tools.

Special goals of the survey were:

(1) the identification of the particular agencies and institutions

providing assessment of training programs;

(2) the identification of types of assessment systems being used by prime sponsors and their cooperating systems and institutions; and the rationale for choosing these systems;

(3) the identification of specific assessment tools utilized in training program assessments; and

(4) the documentation of advantages, disadvantages, problems, and solutions of current assessment methods and tools.

Specific questions related to those training programs stated in the FY '80 Prime Sponsor Annual Plan which had been contracted to the specific organization being studied.

Key personnel contacted for interviews were responsive to questions posed and often sought other colleagues to assist in those areas where specific knowledge of procedure, techniques or tools were required. Difficulties were encountered principally when titles of key personnel contacted and their associated responsibilities failed to produce sufficient information and needed personnel were not available. Therefore, in several instances telephone follow-up was necessary even for basic information. In all cases, follow-up telephone discussions were used to verify information gathered at the site.

Key personnel contacted can be found in Appendix B. (Note that in most instances, additional contacts were made both before these key personnel were identified and interviewed, as well as other personnel who became involved through the efforts of the key personnel).

In Appendix C will be found summaries of the interviews conducted with each prime sponsor organization. In addition, Table 1 serves as a summary of all these field interviews.

In addition to the field interviews with key personnel, the project staff contacted each public and private two and four year educational institution in the Commonwealth. These mail and telephone contacts provided the basis for Appendix D in which is found a listing of assessment / testing professionals who have agreed to provide direct assistance in this area. For those institutions where no contact person is listed, no recognized assessment / testing professional could be located. Prime sponsors and their subcontractors may find isolated professionals on the faculty or staff upon personal investigation. The community college representative on each prime sponsor's advisory committee may be able to assist in identifying para-professionals on their staffs.

SUMMARY

This project is directed at the present environment for assessment procedures utilized by prime sponsors in the Commonwealth of Virginia. The proposed methodology involved primarily a mail survey supplemented by telephone and limited on-site interviews. After field testing a mail survey instrument designed for this study, it was deemed necessary to proceed directly with complete on-site interviews. This was done largely for two reasons: 1) concern over who might complete the mail survey instrument and the possible lack of assessment knowledge by a single staff member; and 2) an early perception that much assessment which was being done was largely informal.

During three months, four researchers visited each prime sponsor organization and interviewed one or more staff members involved in the

intake/assessment/evaluation process. A cooperative response was received at all prime sponsor organizations. Additional telephone follow-ups were utilized.

Each prime sponsor interview was summarized and these summaries are in Appendix C. A cross-sectional summary of all interviews is provided in Table 1 in the next chapter.

In an effort to identify specialists in assessment and testing, contact was made with all two and four year educational institutions in Virginia. The result of this inquiry is a listing of persons skilled in these areas who may be helpful to prime sponsors on a "when needed" basis. This listing is found in Appendix D.

Chapter 3

ANALYSIS OF DATA

OVERVIEW OF PRIME SPONSOR ASSESSMENT PROGRAMS

A team of four interviewers worked during parts of three months involved with on-site interviews in prime sponsor organizations. The focus of the interviews was the assessment system utilized by each prime sponsor and its subcontractors as well as the identification of assessment tools commonly used and problems associated with a tool or with the system or process itself. A summary of findings at each prime sponsor organization was prepared by the interview staff and these appear in Appendix C.

In an effort to summarize the total of assessment processes in the Commonwealth, Table 1 was developed. In this matrix, all the crucial variables have been included. First the prime sponsors are shown in the first column--at the left of the page. Note that five prime sponsors indicated they were either presently or would shortly begin a revision in their assessment system. The fact that fifty percent of the prime sponsors are upgrading their assessment systems further suggests the timelines of the present study (those to be revised are shown with an asterisk).

Table 1 is then divided into five principal parts--each representing a significant part of the total assessment process: (1) intake; (2) pre-program assessment; (3) pre-training screening by subcontractor; (4) ongoing assessment; (5) post-program assessment. Each of these five parts are highlighted below.

TABLE 1

Overview of Prime Sponsor Assessment Programs

PRIME SPONSORS	INTAKE						PRE-PROGRAM ASSESSMENT															PRE-TRAINING SCREENING BY SUBCONTRACTOR	ON-GOING ASSESSMENT											POST-PROGRAM ASSESSMENT								
	In-house Responsibility	Subcontractor Responsibility				Information Verification	In-house Responsibility	Subcontractor Responsibility			Assessment Tools and Techniques												In-house Responsibility	Subcontractor Responsibility			Training Site Assessment Tools & Techniques		Client Progress Review				In-house Responsibility	Subcontractor Responsibility			Formal Assessment				
		VEC	Community Based Organization	Educational Institution				VEC	Community Based Organization	Educational Institution	Achievement Tests	Aptitude Tests	Biographic Profiles	Interest, Personality Attitude Inventories	Work Samples	Interviews/Counseling	Team Assessment						VEC	Community Based Organization	Educational Institution		Observation	Written Tests (Pretest/ Post Test)	Scheduled	Unscheduled	Scheduled	Unscheduled		VEC	Community Based Organization	Educational Institution	Standards			Frequency			
																													(Counselor/ Client Interaction)		(Counselor/ Instructor Interaction)								Employment Standard	Underemployment Standard	Increase Earnings Standard	Single Time Standard	Multiple Time Standard	Informal Assessment
Alexandria*	✓					✓	✓				✓	✓	✓			✓				✓	✓				✓	✓	✓		✓		✓										✓
Arlington	✓					✓				✓	✓	✓	✓		✓	✓	✓			✓					✓	✓	✓	✓		✓			✓								✓
Balance of State		✓				✓		✓			✓	✓	✓			✓				✓			✓			✓	✓		✓		✓			✓							✓
Henrico-Chesterfield	✓					✓	✓					✓	✓			✓	✓			✓	✓					✓	✓	✓	✓		✓			✓							✓
Northern Virginia*	✓					✓	✓				✓	✓	✓			✓	✓			✓	✓					✓	✓	✓	✓		✓			✓							✓
POMPS*		✓				✓		✓			✓	✓	✓			✓				✓						✓	✓	✓			✓			✓							✓
Prince William		✓				✓	✓					✓	✓			✓				✓	✓					✓	✓	✓			✓			✓			✓				
RAMPS*			✓			✓			✓		✓	✓	✓			✓	✓			✓				✓		✓	✓	✓			✓			✓							✓
Roanoke*	✓					✓			✓		✓			✓		✓				✓				✓		✓	✓	✓			✓			✓							✓
STAMA		✓				✓		✓			✓	✓	✓	✓		✓				✓				✓		✓	✓	✓			✓			✓			✓			✓	✓

*Assessment programs scheduled for revision

Intake

Recognizing that the intake function may be assumed by the prime sponsor or may be subcontracted to another organization, Table 1 indicates (with a ✓) where the responsibility for intake is found. The three principal categories of subcontractors are shown. The definitions for these are found in Chapter 1. The information verification column indicates if the intake application information is rountinely verified prior to futher processing.

Pre-Program Assessment

Pre-Program assessment was defined in Chapter 1 as that collection of assessment techniques which are utilized prior to assignment of client to a training program; this is designed to assure that client is properly assigned for training.

Under this category the locus of responsibility is first indicated: in-house or subcontractor. The next section indicates the types of assessment techniques utilized by the prime sponsor or the subcontractor in the pre-program assessment phase. All the indicated techniques may not be used in all situations. (See Chapter 4 for definitions of terms).

Pre-Training Screening

In some instances the subcontractor providing the training will require some form of pre-training screening of clients prior to admission into the training program. All subcontractors may not require such screening for all programs. A check mark in this column indicates that most subcontractors require pre-training screening.

Ongoing Assessment

This phase of the assessment process begins when a client commences training and continues until the time training is completed. This provides the opportunity for two-way assessment: the prime sponsor and/or the subcontractor of the client's progress plus the client's feedback of problems encountered and his reaction to the training.

The locus of responsibility for on-going assessment refers to the case of the majority of training programs.

Under "Client Pregress Review" are shown the two varieties of counseling effort: Counselor/Client Interaction and the Counselor/ Instructor Interaction. Both types may be scheduled (automatically programmed as part of the process) and/or unscheduled (may be on demand by either party).

Post-Program Assessment

Post-program assessment occurs after training is completed. The prime sponsor and perhaps the training subcontractors seek to determine the success of the learning experience. In Table 1 locus of responsibility is indicated, as has been the case in the other assessment phases.

This type of assessment may be done formally or informally. The formal varieties suggest specific actions taken on a routine basis by the prime sponsor or subcontractor. Informal assessment suggests efforts made occasionally at the initiative of either the clients or the prime sponsor/subcontractor, but that no routine follow-up are involved in the process.

Three primary types of standards are common in post training assessment nationally; employment standard, underemployment standard,

and increased earnings standard. These terms are defined as:

(a) EMPLOYMENT STANDARD. The employment standard is based on a determination of whether, after participation in a training program, the client has obtained employment.

(b) UNDEREMPLOYMENT STANDARD. The underemployment standard is based on the assumption that graduate trainees should be able to obtain/hold employment in jobs for which they were trained. If they are employed, but in lesser jobs than for which they were trained, they are "underemployed" according to this standard.

(c) INCREASED EARNINGS STANDARD. This standard assumes that after training, clients should be able to increase their real income over what it was prior to training.

All these three standards of post-program assessment should provide valuable feedback to the prime sponsor as to success not only of the training program but also of prior assessment activities.

When formal standards are utilized, they may be applied at a single time (i.e., 30 days after training, 3 months after training, etc.). On the other hand, when post-program assessment is placed as a high priority and also utilized for maximum effectiveness, it is likely that follow-ups will be conducted several times after training is completed--a longitudinal study of the success of training (ex., after 30 days, 90 days, 1 year, 3 years). This implies a multiple time standard.

INTAKE

Intake is the process of determining which CETA applicants will eventually enter either a work experience or job training program. Federal regulations mandate the principal function to be performed by the prime sponsor as part of the intake process. At the time of intake each individual is to be assessed to determine the person's eligibility and to decide whether CETA can offer the applicant those services or activities which will enable the applicant to obtain unsubsidized employment and increase earned income. (Federal Register, V. 4-1, No. 65, 676.6)

Table 1 reveals that prime sponsors in the Commonwealth vary in the manner they choose to fulfill this requirement. Differences occur in two areas. First, in the decision whether to subcontract or perform in-house the intake activities. And second, the extent to which the information gathered at intake is used to make the final placement decision.

Site of Intake Services

As shown on Table 1 the most popular intake design is to have all intake activities take place under the direct control of the prime sponsor. The in-house design is advantagious for a number of reasons. First of all, it increases the ease of feedback between intake and other units of the prime sponsor. For example, CETA programs are designed to meet the needs of a variety of client populations. Federal eligibility regulations change in response to new social demands and it is at the point of intake that these changes have their first impact. In-house control maximizes the speed at which prime sponsors can respond to change in any of the Act's eight titles.

A second advantage also arises from the opportunity for rapid feedback. As part of the intake process Federal regulations require that in determining who shall be enrolled, prime sponsors must establish appropriate mechanisms to ensure employment and training activities available under the grant are provided to those most in need (675.6 b). This means that the prime sponsor need not only respond to the needs of the client population defined under the Act. But of these populations, the prime sponsor must identify and respond to the applicants most in need. In-house intake services assist in this task.

A final advantage of in-house intake arises out of the administrative complexities of the CETA intake process. Numerous eligibility requirements produce numerous forms and the resulting paper handling problem is significant. Having an in-house intake system optimizes opportunities for reducing excess paper flow. The Fifth District Manpower Consortium, for example, reported a significant degree of success in their attempts to coordinate activities with the Central Records Unit.

Prime sponsors employing in-house intake services generally reported satisfaction with their programs. The same general level of satisfaction was also expressed by prime sponsors contracting out their intake functions to the Virginia Employment Commission (VEC) or a Community Based Organization. The VEC was reported favorable for two primary reasons. Their experience and expertise in providing services to the unemployed and their favorable geographic locations.

Because the VEC is a natural point of reference for the umemployed they are able to make CETA opportunities known to individuals most

likely to benefit from the training. Likewise, their wide geographical dispersement throughout the state provides a considerable advantage. For the Balance of State, with its large service area, this is an important consideration.

The only prime sponsor relying on a community based organization for its intake services is RAMPS. They expressed satisfaction with this design in a large part because it allowed maximum opportunity for participant contract in a large urban service area. Their subcontractor, the Richmond Community Action Program, (RCAP) has service centers located throughout the City and they are familiar with the complete spectrum of community services. RCAP's range of services affords potential clients access to a number of opportunities from which to obtain assistance.

General Observations

Throughout the investigation of assessment systems used by CETA prime sponsors in the Commonwealth a blurring of intake goals and objectives was frequently observed. While exceptions exist, it may generally be concluded that intake information is often overemphasized in training placement decisions. That is, the biographical information gathered during intake, coupled with a brief meeting with a counselor, often determines the training path for a CETA participant.

The overemphasis on intake information is undesirable for two reasons. First, the information requested on the standard intake form is directed principally at assuring the prime sponsor that the participant is eligible for CETA services. While this information is certainly useful for a number of supplemental purposes, its original intent should not be lost sight of.

Overemphasis is undesirable for a second reason because it diverts staff time and expertise away from established tools and techniques designed specifically to assist in selection and placement. Misused intake information may cause participants to be directed toward services that neither fulfill the individual's long-term employment objectives nor take advantage of the latent attributes or interests of the client. Discovery of these attributes and interests is an essential facet in the search for long-term unsubsidized employment.

The problem identified is one of emphasis. Prime sponsors uniformly expressed satisfaction with their intake programs. Accurate verifiable information seemed available regardless of whether the prime sponsor or a subcontractor collected the information. Weaknesses in the programs did not make themselves apparent until consideration was given to the uses to which the intake information was directed. Intake is an eligibility determination function. While the information collected during intake is an important adjunct to a successful assessment process, it cannot provide the only, nor even the principal, basis on which training program placement decision are made.

PRE-PROGRAM ASSESSMENT

The apparent over reliance on information collected during participant intake may in part be explained by the failure of Labor Department regulations to clearly delineate prime sponsor responsibilities in this area. The regulations read thusly:

> "Once enrolled, each prime sponsor shall make a more detailed assessment for each participant and an employability development plan shall be prepared for each Title II participant . . . In doing the detailed assessment, recipients shall consider the utilization of all available CETA and community resources . . ." (Fed. Reg. Vol. 44 N. 85)

Completely absent is a precise definition of the term "detailed assessment."

Lacking an adequate definition prime sponsors have interpreted requirements for pre-program assessment broadly. Variability in pre-program activities is apparent both in the location and range of services provided. Four prime sponsors have in-house services but their similarity ends there. Northern Virginia and Henrico-Chesterfield, for example, have relatively sophisticated programs while Alexandria and Prince William offer minimal services.

The three prime sponsors subcontracting pre-program assessment to the VEC receive a uniform level of limited services, usually confined to the administration of an aptitude and/or achievement test. Two prime sponsors are relying on community based organizations, the RAMPS and Roanoke consortiums. At RAMPS, the ROIC and RCAP both have several pre-program assessment options available but emphasis is placed on a combination of the results of a basic achievement test and biographic profiles. Roanoke recently decided to move their pre-program assessment in-house and are planning to implement an extensive program.

The only prime sponsor subcontracting pre-program assessment responsibilities to an educational institution is Arlington. Their program at the Arlington Skills Center is well recognized as a leader in the Commonwealth and many prime sponsor representatives are well versed in the services provided. Arlington's program is without doubt the most advanced in the State.

The type of assessment tools and techniques employed by prime sponsors and subcontractors varies directly with the sophistication of their pre-program assessment system. Table 1, demonstrates that all

prime sponsors have an achievement test available for use. But the purposes to which test results are directed varies across the prime sponsors. For example, at STAMA the California Achievement Test (CAT) is used almost extensively to determine whether the client has adequate educational skills to meet the requirements valid administration of GATB. In contrast is RAMPS, where the results of the Test of Adult Basic Education (TABE), plays a significant part in the ultimate placement division.

Biographic profiles, interviews and counseling represent the most frequently used and most important assessment tools and techniques. This is true for two reasons. The biographic information is collected during intake and is therefore readily available. And the interview and counseling are necessary components in the development of the mandated employability development plan. All prime sponsors rely heavily upon personal contact between the client and assessment counselor. These interviews accomplish the simultaneous functions of assessing participant barriers to training, identifying participant desires, setting realistic objectives and introducing the participant to the CETA system. The contact established between the participant and assessment counselor during development of the EDP was uniformly reported to be the key variable in the selection of a training path.

Team assessment is used by four of the prime sponsors and was uniformly reported desirable. Its principal contribution rests upon the effect it has on increasing counselor and participant confidence in the correct interpretation of test results. In addition, team assessment was reported to facilitate communication between the assessment counselor,

job developer, and job counselor. Such communication ensures consideration of the full range of CETA and community resources, maximizing opportunities for a successful transition into unsubsidized employment.

General Observations

A cursory examination of Table 1 reveals that all prime sponsors in the Commonwealth have some type of pre-program assessment available. Most frequently used tools and techniques include aptitude and achievement tests and biographic profiles. However, questions not answered by Table 1 are many. For example, (1) How are the tests given?; (2) Are the tests designed and selected to meet the needs of CETA participants?; (3) Are they being administered and evaluated correctly?; and most importantly, (4) Are they contributing to increased program success?

Precise answers to these questions are not avaiable but enough information has been gathered to draw some significant conclusions. With respect to the frequency of test administration, the study identified an extreme range of variability. At some prime sponsors each and every participant was required to take some type of standardized test. While at others administration was infrequent and haphazard. With few exceptions, there is a uniform absence of criteria upon which the pairing of client needs and test function could be completed. More often than not, in those instances in which a standardized test was given to all participants, the information obtained from the instrument carried little weight in the ultimate placement decision.

Few tests are designed specifically to meet the needs of clients enrolled in CETA programs. While this no doubt greatly increases the difficulty of proper test selection, it does not present an insoluable

identified an extreme range of variability. At some prime sponsors each and every participant was required to take some type of standardized test. While at others administration was infrequent and haphazard. With few exceptions, there is a uniform absence of criteria upon which the pairing of client needs and test function could be completed. More often than not, in those instances in which a standardized test was given to all participants, the information obtained from the instrument carried little weight in the ultimate placement decision.

Few tests are designed specifically to meet the needs of clients enrolled in CETA programs. While this no doubt greatly increases the difficulty of proper test selection it does not present an insoluable problem. In order to insure proper test selection, both the needs of the individual client and the total client population must be evaluated. The Employability Development Plan (EDP) does provide a great deal of information on individual needs but a number of prime sponsors do not possess a comprehensive knowledge base on the characteristics of their client population. Age, sex, and educational level distributions are examples of macrolevel social indicators that might assist in selection of testing instruments. This factor is demonstrated in the contrasts between the Arlington, RAMPS, and Henrico prime sponsors. Arlington serves a population heavily dominated by recent Asian immigrants, RAMPS serves a predominantly minority population with low educational levels, each in contrast to Henrico with a client population that is relatively well educated (see Appendix C).

Besides the attributes of the population being served, attributes of the tests themselves need to be considered. Purpose, reliability,

problem. In order to insure proper test selection, both the needs of the individual client and the total client population must be evaluated. The Employability Development Plan (EDP) does provide a great deal of information on individual needs but a number of prime sponsors do not possess a comprehensive knowledge base on the characteristics of their client population. Age, sex, and educational level distributions are examples of macrolevel social indicators that might assist in selection of testing instruments. This factor is demonstrated in the contrasts between the Arlington, RAMPS, and Henrico prime sponsors. Arlington serves a population heavily dominated by recent Asian immigrants, RAMPS serves a predominantly minority population with low educational levels, each in contrast to Henrico with a client population that is relatively well educated (See Appendix C.)

Besides the attributes of the population being served, attributes of the tests themselves need to be considered. Purpose, reliability, validity, cost, etc. (See Chapter 4), need to be considered. In the course of the research it was discovered that few prime sponsors are using pre-program assessment systems designed with these factors in mind. Frequently observed were eclectic programs with test selection based on factors that were not evaluated in a systematic fashion.

It is encouraging to note, however, that a number of prime sponsors have begun a systematic review and redesign of their assessment systems. Most are still in their early stages of development but many of the problems discussed in this report have been taken into consideration in the new program proposals.

Proper test selection will not alone meet the requirements of a properly designed system. Correct test administration and result interpretation are equally important. The limits of this study did not allow for a complete evaluation of this activity. Nonetheless that a problem exists in this area was readily apparent. Administration and evaluation are difficult professional activities requiring a high level of training and skills. As the new assessment designs are being implemented difficulties in this area are bound to increase. Yet we found little evidence of aggressive quality assurance programs. Administration and evaluation were often tasks performed by different individuals, increasing the sources of potential errors. Furthermore, throughout the Commonwealth there was a lack of consistency in both the tasks defined under the position of "assessment counselor" and the qualifications and skills required to hold the position. Fortunately the majority of the tests currently being used require limited expertise for administration and evaluation. But as the complexity of the pre-program assessment grows, greater emphasis will have to be placed on questions of quality assurance.

The ultimate success of a pre-program assessment system can only be determined by an objective quantitative comparison of different testing regimes. Information gathered as part of this research project indicates that no prime sponsors have evaluated their pre-program assessment systems in this manner. That is, there is no information available upon which to make an accurate statement concerning the utility of pre-program assessment for CETA participants. This is true for both complete programs and portions thereof. It has yet to be determined empirically whether participants who pass through pre-program assessment have higher success rates than those who do not.

ONGOING ASSESSMENT

Ongoing assessment refers to the evaluation of a client's progress and skill acquisition once the client is placed into a training program. Across prime sponsors and educational programs there exists a wide variation of methods and procedures used to assess clients. As can be seen in Table 1, there are differences in the agencies involved and in the assessment tools utilized. However, in general, the ongoing evaluation process is shared by both the placing agency (prime sponsor, VEC, or community-based organization) and the training subcontractor.

Educational Institution Activities

In all cases, the ongoing assessment of a client's performance is handled by the training subcontractor. In turn, it is the training institution's instructors who perform the actual appraisals of the client. And in most cases, the instructors have a wide discretion in selecting assessment techniques. As a result, there is a considerable amount of variability in the ongoing assessment process. The training site assessment tools and techniques most commonly employed are written tests and observation. Some programs are particularly suitable to one type of assessment technique while others are more suitable to another. For example, in a typing course results are measurable in quantifiable terms (words per minute) and progress is easily documented. Similarly, in the computer related courses subcontracted to Control Data Institute, formal written tests have been developed for specific course units which the client is required to complete within a prescribed time frame. In general, programs such as clerical skills, bookkeeping, drafting, GED, English as a

second language, computer technology, and computer programming have written appraisals as the norm.

Other types of programs are more suitable to informal assessment techniques, such as observation. Performance appraisal based upon the observations of the training instructor or supervisor is the most common method of ongoing assessment. The primary reason for this widespread use of observation as an assessment device is that in a majority of the programs such as those associated with the building and construction trades, truck driving, or cosmetology, client progress is not easily evaluated by means of a written test. Another reason for the reliance upon observation as an assessment technique is the highly personalized nature of CETA training programs. During the course of training a strong link is maintained between the client and the instructor. For example, in a typical program at a skills center, a client is enrolled in a program with a relatively small number of students (usually 12 or less), and works with the same teacher for six to eight hours a day for a period of six months. Therefore, informal techniques can be utilized since the instructor usually has a clear knowledge of a particular client's progress. Again, the development of specific assessment techniques are usually left to the descretion of the instructors, but it appears that a large number of the instructors using observation as the primary means of assessment usually keep some form of progress chart on each client. In most cases, these charts are available to the clients and provide the necessary feedback as to their progress during training.

Training site assessment tools and techniques were primarily restricted to written tests and observation. Rarely were any formal pretest/posttest evaluation designs encountered. The exception being in

clerical skills courses where typing skills were measured with a standardized pretest/posstest design.

Placement Agency Activities

Most of the involvement from the placement organization is limited to obtaining information to update each client's Employability Development Plan. In most programs this information is obtained through client/counselor and client/instructor meetings. Across prime sponsors, these meetings vary in terms of the participants involved and in the time interval held. For example, as is indicated in Table 1, Arlington, Henrico Chesterfield, and the Northern Virginia prime sponsors have regularly scheduled meetings between the client, counselors, instructors and job developers. Although the time interval between meetings varies depending on the length and nature of the training program, generally these scheduled meetings are held every two weeks. During these meetings the client's progress, as determined by the instructors is communicated to the client and noted on the client's Employability Development Plan. The other prime sponsors utilize the same basic client review process, but on an unscheduled basis. In these cases the review is likely to take place at the conclusion of a training segment, or when an instructor or job counselor thinks it necessary.

In addition to the client review meetings some prime sponsors require formal written progress reviews from the training institutions. For example, Henrico consortium has developed an evaluation from which training instructors or worksite supervisors are required to submit every 60 days. Similarly, instructors of the programs offered by STAMA are required by VEC-CETA counselors to submit written progress reviews. Although the format of the progress reports have not been developed or standardized by STAMA

or the VEC-CETA, some type of written verification of a client's performance is required at least every thirty days. The most intensive use of written evaluations appear to take place at the Northern Virginia Skills Center. There, instructors are required to submit bi-weekly status reports on participant's progress to the job counselors. These reports then become the center of discussion during the bi-weekly conferences held for the client and the assessment team.

The other prime sponsors do not appear to rely upon written evaluations as a means of ongoing assessment. Instead, heavy reliance is placed upon the client/counselor/instructor conferences described previously. Overall, the placement agencies (prime sponsor, VEC, community-based organizations) do not become actively involved in the ongoing evaluation process. The placement agency's interest appears to be limited to identifying a client's overall level of job readiness, rather than on the client's actual level of skill acquisition. In most cases, the placement agencies have very little input into, or knowledge of, the types of assessment techniques program instructors utilize to evaluate clients. It appears that greater placement agency input and interest into ongoing client evaluation could greatly facilitate the usefulness of the process. A greater utilization of formal evaluation techniques and designs such as pretest/posttest measures, could help identify the actual benefits in terms of skill acquisition a client is receiving from a particular course. This in turn will allow the placement agency to better monitor the quality of course offerings provided by the subcontractors.

POST-PROGRAM ASSESSMENT

Post-program assessment refers to those activities associated with evaluating a client's progress after training has been completed. Generally, these activities focus on how well the client is progressing in his/her employment situation. The standards by which a client's progress is measured generally include: (1) an employment standard, which is a determination of whether or not the client is employed; (2) an underemployment standard, which reflects whether or not the client is employed in a position which is directly related to the training received; and (3) an increased earnings standard, which is a measure of a client's relative economic situation prior to and following training. Thus, generally the purpose of post-program assessment is to determine whether or not training has enhanced a client's employability in the labor market.

Federal regulations mandate that some follow-up be conducted on all clients thirty days after the completion of training. All of the prime sponsors in Virginia do participate in some form of client post-program assessment, though procedures and practices vary widely. For a majority of the prime sponsors post-program assessment is an in-house responsibility (see Table 1). However, Balance of State (BOS), Peninsula Office of Manpower Programs (POMP), Richmond Area Manpower Programs (RAMPS), and Southeastern Tidewater Area Manpower Authority (STAMA) prime sponsors delegate post-program assessment responsibilities to either the Virginia Employment Commission (VEC), a community based organization, or both (see Table 1). For example, STAMA subcontracts most post-program evaluation activities to the VEC, but also utilizes the Southeast Tidewater

Opportunities Project (STOP) for the assessment of clients completing individual referral programs. RAMPS, the only other prime sponsor utilizing a community based organization for post-program assessment activities, subcontracts to the Opportunities Industrialization Centers (OIC).

For a majority of the prime sponsors, client post-program assessment is conducted in an informal and unstructured manner (table one). In these cases, post-program evaluation activities is limited to phone contact with a sample of participants or employers on an unscheduled basis. Also, there is generally a limited degree of participant initiated contact. In many instances a client will remain in contact with his/her former job counselor, reporting on their particular progress in employment.

Some prime sponsors, notably Prince William County, STAMA, and POMP have more formalized post-program assessment procedures. Prince William County utilizes a mail questionnaire for post-program follow-up. Ninety days after completion of training, a questionnaire is mailed to every client requesting information relating to the particpant's employment satus, wage level, and job title. Formal post-assessment procedures at STAMA is limited to those clients completing individual referral programs. The Southeast Tidewater Opportunity Project (STOP) attempts phone con ct with both the client and his/her employer thirty, sixty, and ninety days after the completion of training. Documentation of each participant's employment progress is then placed in the client's file. Post-assessment activities conducted for POMP closely parallel those reported for STAMA. The VEC initiates phone contact with either the clinet or the clinet's employer to determine each participant's

job status at thirty, ninety, and one hundred twenty day intervals. Results of these contacts are documented and placed into the client's file.

As best can be determined, once post-assessment information is gathered and placed in the client's files, little further analysis is conducted on an aggregate basis. That is, little effort is made to combine the results of the post-program assessment information for all clients into a format which allows the assessment of a particular program. This type of analysis would certainly appear to be useful in assessing the effectiveness of certain programs in terms of getting clients job ready for continued employment. The Balance of State prime sponsor which intends to bring post-assessment activities in-house during FY '81 plans to conduct such analyses in the future. Although, at the time information was gathered for this report exact procedures had not been formalized, generalized plans for BOS post-programs procedures can be found in Appendix C.

Chapter 4

TEST SELECTION

INTRODUCTION

During the present century, techniques for appraising the individual have been developed in great diversity. Typically, when an evaluator desires to measure some quality in a group or individual, the problem of selecting the best instrument for the desired purpose arises. Ordinarily, there will be several tests of testing procedures that have been developed which seem at least to be possible alternatives. Which procedure is best?

This chapter begins by defining what a standardized test is and classifying the types of standardized tests available. Some basic principles in test selection will be examined along with potential sources of information about specific tests. Alternative assessment techniques will also be explored.

DEFINITION AND CLASSIFICATION OF STANDARDIZED TESTS

In order to facilitate the understanding of standardized tests, it is desirable to provide an operational definition. Noll (1972, p. 5) presents the following definition of a standardized test:

> A standardized test is one that has been carefully constructed by experts in the light of acceptable objectives or purposes; procedures for administering, scoring, and interpreting scores are specified in detail so that no matter who gives the test or where it may be given, the results should be comparable; and norms or averages for different age or grade levels have been predetermined.

The classification of standardized tests is most commonly based on what the tests measure. For the purposes of this report, standardized

tests will be classified according to three types: (1) aptitude tests, (2) achievement tests, and (3) interest, personality and attitude inventories. While generally all standardized tests should aid the decision making process, the specific purposes of each type of test vary considerably.

Aptitude tests are ability tests which are designed to appraise what an individual can potentially learn to do if he receives appropriate education or job training. Aptitude tests can be subdivided into three categories: (1) tests that provide a general measure of intelligence (aptitude), (2) tests that give measures of multiple aptitudes, and (3) tests that measure some specific kind of aptitude. Tests of general intelligence are commonly used as a single measured ability in the general prediction of future vocational or educational success. Multiple aptitude tests are often used to make differential predictions. Specific aptitude tests are frequently used to predict succession a specific vocation. Examination of particular aptitude tests will be presented in a later section.

Achievement tests, although often confused with aptitude tests by the layman, are ability tests which are designed to appraise what knowledge or skills the individual has learned as a result of planned previous experience or training. Thus, an achievement test is used to measure an individual's present level of knowledge or skills or performance while an aptitude test is used to predict an individual's ability to learn. Standardized achievement tests may be classified as diagnostic tests, single subject-matter tests, or survey batteries. A brief description of some of these tests as well as the uses of

standardized achievement tests will be presented in a later section.

Interest, personality and attitude inventories are grouped together because they are noncognitive measures that have no right or wrong answers. These inventories are designed to appraise the areas or patterns of interest a person has, an individual's mental or psychological make-up, and an individual's response pattern to particular statements. All of these tests provide the user with some additional information that would provide better overall picture of the individual. Discussion of various tests available to measure noncognitive traits, their advantages and limitations, and their uses and misuses will be presented in a latter section.

BASIC PRINCIPLES IN TEST SELECTION

The intelligent selection of an appropriate test is a problem encountered by evaluators, counselors and instructors alike. Because a test is ordinarily used for many years, it is imperative that selection of the test be examined thoroughly. All too often a test is chosen, purchased and used solely on the recommendation of an individual who may have little actual knowledge of the test itself. Test selection should be a cooperative effort, with all professional staff who intend to use the test information having some input into the selection process. There are many different factors to consider when selecting a test. Table 4.1 lists a number of specific considerations entering into evaluation of a test. The remainder of this section will examine some of these basic principles in test selection.

Table 4.1

Factors To Consider In Test Selection

1. Purpose
2. Validity
3. Reliability
4. Administration
5. Scoring
6. Cost
7. Format
8. Interpretation

The first task in the selection of a test is to determine the purposes of the testing. Is the test to be used for instructional purposes such as the evaluation of learning outcomes or learning diagnosis? Is the test to be used by counselors for vocational or educational guidance? Do administrators want a test to aid in selection, placement, and classification? Once it is determined what specific purposes the test will be used for, it is easier to decide what general kind of test is most desirable. Aptitude, achievement, interest, personality, and attitude tests are not used for exactly the same purposes. The specific uses of these tests will appear in individual sections.

Two technical considerations that are of extreme importance in test selection are validity and reliability. Validity refers to the extent to which a test measures what we actually want it to measure. The degree of validity is the single most important attribute of a test. If a test does not measure what it purports to measure, then it is of very little use to the evaluator. Because a test may be used for multiple purposes, no single index of validity exists. A test may be highly valid for one purpose and almost wholly lacking in validity for

another. There are basically three measures of validity: content validity, criterion-related validity and construct validity.

Content validity refers to the adequacy with which a test represents or samples the domain of subject matter to be examined. No numerical expression exists for content validity. It is determined by thorough and detailed examination of the actual test tasks. It is clear that content validity is extremely important for measures of achievement. How well do the tasks of a particular achievement test represent what is considered to be important outcomes of instruction? To answer this question, it is advisable that if achievement tests are to be used, teachers should help in the selection of achievement tests since they are best able to judge the content validity of a test relative to a particular course.

Criterion-related validity refers to the technique of studying the relationship between the test or scale scores and one or more external variables, or criteria, thought to measure the attribute under study. Criterion-related validity may take the form of concurrent validity or predictive validity, dependency on the time the criteria data are collected. When the criterion data is collected at approximately the same time as the test data, concurrent validity is explored. If the criterion data is collected at a later date, we have predictive validity. The validity of an aptitude, prognostic or readiness test is the extent to which the test accurately predicts the success or failure of future learning in a particular area of interest.

Construct validity refers to the degree to which the variability of test scores can be accounted for by certain psychological contructs

such as intelligence, motivation, interest, creativity, or abstract reasoning ability. If a test has construct validity, the scores on the test will vary according to some underlying psychological theory.

Reliability, like validity, is a technical characteristic of a test which should be a major consideration in the selection of tests. Reliability refers to the accuracy or precision of a test. One way of expressing this precision is the calculation of the standard error of measurement. The standard error of measurement is the standard deviation of a person's observed scores over repeated testings. Other methods of estimating reliability commonly found in test manuals include measures of stability, measures of equivalence and measures of central tendency.

One common measure of stability is called a test-retest estimate of reliability. This estimate is obtained by administering a test to a group of individuals, readministering the same test to the same individuals, and then correlating the two sets of scores. If the test is stable, those individuals scoring high on the first administration of the test should be scoring high on the second adminstration of the test, while those individuals with low scores on the first test should score low on the retest. Tests used for long-range predictions should have relatively high coefficients of stability.

The equivalent forms estimate of reliability measures changes due to specificity of knowledge rather than changes from one time to another. This estimate is obtained by giving two forms of a test, equivalent with respect to content, means, and variances, to the same group of individuals on the same day and correlating thest two test scores. If the

purpose for giving a test is for making inferences concerning knowledge one has in a particular subject area, a coefficient of equivalence would be of interest.

The two estimates of reliability mentioned above require data from two different testing sessions. There are other measures of reliability which require only one set of test data. These estimates reflect the homogenity of the test items and are often called measures of internal consistency. Two commonly used measures of internal consistency are the split-half reliability coefficient and Kuder-Richardson (K-R 20) reliability coefficient.

The question of how valid or how reliable a test should be depends largely upon the purpose for which the test is to be used. For achievement tests, content validity is of utmost importance as are equivalence reliability estimates and internal consistency estimates. Aptitude, interest, and personality measures should have some measure of criterion-related validity depending upon their purpose, as well as stability estimates, equivalence and internal consistency estimates of reliability. It is generally accepted that the tests should have reliability coefficients of at least .85 if they are to be used in making decisions about individuals and about .65 if group decisions are to be made.

In addition to reporting the types of validity and reliability estimates, the test manual should also provide other relevant information. The characteristics of the group(s) on which these estimates were computed should be reported in detail. Standard errors of measurement, standard errors of estimates, sample sizes, representativeness as

well as means and standard deviations of sample scores should also be reported.

Although validity and reliability may be two technical considerations that are extremely important, there are other practical considerations that should be taken into account when selecting a test. Among the factors to be considered are administration, scoring, cost, format and interpretation.

In evaluating the practical usability of a test, one factor that should be taken into account is the ease of administration. Because a standardized test must be administered under uniform conditions that resemble as closely as possible the conditions that existed when norms were established and reliability and validity data were obtained, the adequacy of directions for administration is important. The test manual should provide a description of standard conditions for testing as well as norms and directions that are clear and complete. If one wishes to compare observed results to the norm groups, directions must be clear and concise and followed exactly.

The time at which the tests should be administered may be very pertinent to test selection. It is often desirable to administer achievement tests at the same time of the year the norm data was gathered. Although many test manuals provide mathematically interpolated norms for time periods other than those when normative data was empirically collected, it should be noted that this interpolated norms are only estimates. In addition to the time of year the test is administered, the time required for administering the test may also influence the selection of one test over another. If one test takes 90 minutes to

administer but consists of three thirty minute sections, while another test takes 60 minutes but given at one time, class scheduling may necessitate the longer test administered shorter time spans. If class scheduling is not a problem, a test with only one set of directions and one timed period may be easier to administer.

In selecting tests, one must also consider the manner in which the tests are to be scored. If the test is to be administered to a few individuals and interpretations of these tests are needed for immediate feedback, then tests which can be hand scored or are self-scored may serve the evaluator's purposes better. If the tests are to be hand-scored, the procedures for scoring should be set forth clearly and concisely in such a way to maximize scoring efficiency and minimize scoring error. If many tests need to be scored in a relatively short period of time, machine scoring may be advisable. The availability of special scoring equipment or the monetary resources required to have the answer sheets scored by the test publisher or a test scoring center should enter into the test selection process.

Two other minor points in test selection that should be considered are the cost and the format. All things being equal, the test with the lowest per pupil cost in terms of administration and scoring should be selected. However, validity, reliability, norms, and an adequate manual are all more important than cost. When determining the test cost per pupil, costs for testing booklets, the reusability of the test booklets, cost for training the test administrator, and costs for scoring the tests should all be considered. However, the final question that should be asked is what is being purchased rather than how much it will cost.

As far as the format of the test, the test should be printed in clear type of a size appropriate for the grade level. If pictures or illustrations are used, they should be of high quality. The actual layout of the test items on the page has a good deal to do with the ease of taking the test. Response items should be well separated from one another, rather than crowded together. Test items should not run over to the next page. In addition, if the test is divided in a number of separately timed sections, it is easier to administer a test with fewer sections and where close timing is not critical.

One final factor that should be considered in test selection is the availability of information presented to adequately interpret these results. The test publisher has the responsibility to provide information necessary for accurate interpretation. Along with validity and reliability estimates, the publisher should also provide characteristics of the standardization and norming sample so that the test user can determine if the norms are representative and appropriate for his purpose.

Certainly the types of scores or the kinds of norms available for tests has a direct bearing on the interpretability of the test scores. Percentiles, normalized Z and T scores, stanines, grade equivalents are scores frequently found in test manuals. There are advantages and disadvantages associated with each type of score. For example, percentiles are fairly easily interpreted by both evaluator and student but they have the disadvantage in that the size of the percentile unit does not remain constant in terms of raw score units.

Regardless of the type of score or kind of norms presented in the testing manual it is essential that the evaluator understand the

meaning of these scores and can interpret the test scores to others. Not only must the test evaluator know what information the test score gives but also the precision of this information and how the information can be used properly. In many cases this type of information is adequately presented in the test manual. For other tests, it may require the evaluator to undergo extensive training in the administration and interpretation of the specific test.

All of these factors presented in this section should be considered prior to selecting a test. If tests are to be helpful in a decision making process, it is necessary that the tests selected match the intended purpose of the test, be administered correctly, and interpreted accurately.

SOURCES OF TESTING INFORMATION

The previous section has examined certain information that one should obtain about a test prior to final test selection. However no specific mention was made relative to specific sources of testing information. This section discusses resource materials for finding lists of available tests as well as descriptions and criticisms of individual tests.

Probably the most useful single reference source for a person involved in selecting an appropriate test is a series of Mental Measurement Yearbooks prepared by Buros. The Mental Measurement Yearbooks include factual information about each test that a potential user may need such as author, publisher, publication date, cost, time to administer, appropriate grade levels, number of forms available and

type of scores provided. In addition to the factual information, each test is reviewed by educational and psychological authorities, pointing out strengths and weaknesses of a test, comparing it to other tests, and offering potential uses of the test. A cumulative bibliography of books and articles that reference a particular test appear for each test.

Buros' Tests in Print provide a comprehensive test bibliography and index to the first five books in the Mental Measurement Yearbook series. All commercially available tests prior to 1961 are listed with an updating of the list provided in the classified index of tests in the Sixth Mental Measurement Yearbook. References to specific test reviews in Mental Measurement Yearbooks are included for each test listed in the index.

Information on tests published since the last Mental Measurement Yearbook can be found in a number of sources. Professional journals such as the Journal of Educational Measurement provide test reviews on the most significant new educational and psychological tests. Information on new tests or revised tests is also available directly from the test publishers. Factual information is readily available from these publishers, but since the test publisher is not an entirely unbiased source of information, the critical reviews of these tests must be weighed accordingly. A list of test publishers is found in Appendix E.

Texts and reference books in special areas of testing provide another source of testing information. A book dealing with tests of a particular type, such as vocational placement tests, usually provide the reader with a representative selection of established tests in the area.

An evaluation of each test is usually given, indicating the purposes for which it was designed, its strengths and weaknesses, and potential uses. However it should be noted that recently published tests or techniques still in the experimental stage are not likely to appear in books due to the lay time between production of the test and publication of reviews.

Finally one additional source of testing information which should not be ignored is the test itself and the manual the publisher prepares to go with it. The potential user can make objective decisions as to how well the content of the test and the form of the test corresponds to the objectives and functions he wishes to measure. The test manuals, which vary considerably in quality and comprehensiveness from one test to another, should provide a great deal of information with regard to test use and test interpretation. A specimen set containing a copy of the test, instructions for administering and scoring the test as well as additional information can be obtained directly from the publisher for a minimal charge. Specimen sets may also be found in test files in the library of local universities.

USES AND MISUSES OF STANDARDIZED TESTS

In the following sections specific types of standardized tests will be examined in more detail. Aptitude test, achievement tests, interest inventories, personality tests, and work samples will be examined with respect to their intended purposes, their advantages and disadvantages, and inclusion of some of the commonly administered tests in each group. In addition, appropriate uses by teachers, counselors, evaluators, and administrators are presented along with common misuses of these tests.

Aptitude Tests

Aptitude tests are designed to appraise what an individual can potentially learn to do if the individual receives appropriate education or training. Because theories of intelligence range from the idea of a general factor of intelligence to a multi faceted structure, many different types of aptitude tests have been developed. Included in the classification of aptitude tests are tests of general intelligence, multifactor aptitude tests, and special aptitude tests.

Commonly used individually administered tests of general intelligence are the Stanford-Binet, the Wechsler Intelligence Scale for Children (WISC) and the Wechsler Adult Intelligence Scale (WAIS). All three tests are technically sound and provide adequate prediction of future academic success. The major advantages of individually administered tests of general intelligence are: (1) these tests tend to be more reliable, (2) they can be used with individuals lacking in test taking skills or suffer severely from test anxiety, and (3) they require considerably less reading ability than most of the group tests. However, the individual tests of general intelligence usually are expensive to administer and require a highly trained administrator.

Group intelligence tests are used to a much greater extent than individually administered intelligence tests. They are much less expensive and can be administered by an individual with minimum training. Generally, the group tests provide comparable results to the more time consuming individual tests. Most group intelligence tests measure essentially the same skills, namely verbal and nonverbal skills. The list of group intelligence tests available for each grade level is

quite extensive. Some of the more commonly used group administered tests of intelligence for high school students and adults include the California Test of Mental Maturity (CTMM), Cooperative School and College Ability Tests, Series II (SCAT, Series II), the Lorge-Thorndike Intelligence Tests (L-T), College Qualification Tests (CQT), American College Testing Program Exam (ACT) and the College Entrance Examination Board Scholastic Aptitude Test (SAT).

The use and popularity of multifactor intelligence tests has grown substantially with the vocational and educational counseling movement. Identification of differential abilities is certainly beneficial if this knowledge increases the predictability of success in a particular educational or vocational area. However, differential prediction of multifactor aptitude tests is not very good since success in a particular program is general and not solely dependent upon specific aspects of intelligence. Buros lists 16 multiple-aptitude batteries in his sixth edition of his Mental Measurement Yearbook. Four of the most widely used multiple aptitude batteries are the Differential Aptitude Test Battery (DAT), the General Aptitude Test Battery (GATB), the Multiple Aptitude Tests (MAT) and the Nonreading Aptitude Test Battery (NATB). A brief review of these four tests may be found in Appendix F.

Special aptitude tests, developed primarily for aiding in vocational and educational selection decisions, are designed to measure an individual's potential ability in a specific activity. Generally, special aptitude tests may be more useful in selection or placement decisions by an institution when compared with multifactor aptitude tests. There are numerous types of special aptitude tests. Mechanical aptitude

tests measure traits such as spatial ability, perceptual speed, manual dexterity and mechanical reasoning. Although some of these traits are measured in multifactor aptitude tests, it may be beneficial for students interested in vocations requiring one or more of these aptitudes to take the A.C.E.R. Mechanical Reasoning Test or the Revised Minnesota Paper Form Board Test. Similarly, individuals interested in clerical work may be advised to take clerical aptitude tests such as the Beginner's Clerical Test or the Minnesota Clerical Test.

There are many ways in which aptitude test results can be appropriately used by teachers, counselors, and administrators to help in selection, placement, and classification. Aptitude test scores can help the teacher form realistic expectations of students and help in the development of curricula orientation. Counselors can get a better idea of a students differential abilities using multifactor aptitude tests, even though these measures will not necessarily improve differential prediction. Using a multifactor aptitude test can often be used as a morale builder since most students usually perform adequately on some subtests.

Aptitude test results can also be misused. One potential misuse is the development of fatalistic expectations of teachers and counselors concerning a student's chances of success on the basis of an aptitude test score. If a counselor interprets a low test score to mean that the student can not possibly succeed in that particular area which in turn provides fuel for a poor self-concept, it is indeed unfortunate and unnecessary. Counselors with the aid of aptitude tests should help students obtain and accept an accurate self-concept, not an inaccurately high one.

Achievement Tests

All standardized achievement tests are designed to assess an individual's acquired knowledge and skills at a particular point in time. There are essentially three types of standardized achievement tests: the diagnostic tests, the single subject matter achievement tests and the survey batteries. The primary differences in these three types of achievement tests reflect designs to measure different aspects of an individual's knowledge.

The diagnostic tests are designed to identify specific strengths and weaknesses of the examinee in some particular field of knowledge. For example, the Gates-McKillup Reading Diagnostic Test, and the Stanford Diagnostic Reading Test (SDRT) measure such factors as reading comprehension, vocabulary and word recognition skills in an attempt to identify spceific strengths and weaknesses in an individual's reading skills.

Single subject-matter achievement tests measure an individual's educational accomplishments in a single content area. There are a wide variety of single subject-matter tests available for nearly every subject and every grade level. These tests are much more specific than battery subtests covering the same topic. Since single subject-matter tests are revised with greater frequency, these tests tend to reflect curricular changes sooner than survey batteries and this may be more in harmony with objectives of a particular course. Examples of achievement tests in specific subjects include reading readiness tests, reading tests, arithmetic tests, spelling tests and vocational achievement tests.

Achievement test survey batteries consist of a group of tests in different content areas standardized on the same population to allow for comparison across all components. Most batteries provide measures

and achievement in vocabulary, arithmetic, spelling, reading, and language. Total scores as well as separate subtest scores are commonly given. Generally, survey batteries are preferred over a combination of single subject-matter test because a survey battery is more economical, takes less time to administer and provides a reliable measure of an individual's strengths and weaknesses once it is standardized on the same population. Some of the frequently used achievement batteries are the California Achievement Tests (CAT), Iowa Tests of Educational Development (ITED), Metropolitan Achievement Tests (MAT), Sequential Tests of Educational Progress (STED), and the Stanford Achievement Test (SAT). These tests and other achievement batteries are briefly reviewed in Appendix F.

For guidance purposes, it is advisable to administer both a survey battery and a single subject-matter test that provides additional information in a particular area. Survey batteries can be used as preliminary screening devices. Certain individuals then can be given a single subject-matter and/or diagnostic test in an area of suspected weakness. By using such a sequential approach to testing, every individual would not have to take every test thus reducing costs considerably.

Interest Inventories

Interest inventories are designed to access an individual's level of interest or preference in a variety of types of activities. There is generally very little difference among the inventories with respect to the general purpose. With interest inventory data available, a trained counselor can assist an examinee in making more valid decisions

regarding future educational or vocational plans. If used appropriately, interest inventories can help an individual crystallize his interests by having him contemplate his future plans as well as clarifying some misconceptions that might arise concerning future occupational goals. It should be noted that the key to the value interest inventories have in vocational and educational couseling is determined by the professionalism accorded the test score results. In order to interpret interest test scores the examiner must be thoroughly trained and familiar with their uses and misuses, their fallibilities, their stability, and the general value in helping make sound educational and vocational decisions.

Generally, interest tests are very susceptible to response set and faking and stereotypic responses. The tendency is for an individual to respond to items in a socially accepted manner. Interest inventory scores can also be influenced by the ambiguity of the questions asked. Two people can respond to the same question in the same way but for entirely different reasons. Therefore, responses to individual items represent relative indications of likes and dislikes rather than absolute indicators. In addition, because of the verbal nature of interest inventories, there is a genuine possibility of misunderstanding or misinterpreting items particularly for illiterates and students with reading deficiencies.

Interest inventories do not provide extremely accurate predictions of job success, academic success or job satisfaction. The predictive validity of interest inventories is generally less than that found for cognitive measures. Correlations between interest inventory scores and academic success is normally about .30. Although interest scores may

be related to various measures of job or academic success, the use of these scores alone to predict future success is not appropriate.

There are numerous standardized interest inventories commercially available designed for vocational and/or educational guidance. Although the general purpose of these instruments are essentially the same. there are some differences with respect to construction, scoring, ease of administration, and ease of interpretation. Three of the most frequently used interest inventories are the Kuder Occupational Interest Survey (OIS), the Minnesota Vocational Interest Inventory (MVII) and the Strong Vocational Interest Blank (SVIB). These interest inventories as well as some additional areas are reviewed in Appendix F.

Personality Tests

Personality tests are designed to measure one or more components of an individual's mental or psychological make-up. Most commercially available standardized personality tests are either structured self-report inventories or unstructured projective test. Self-report structured inventories require the individual to describe himself while projective tests require the individual to interpret objects other than himself.

Both self-report inventories and projective tests generally have low validity and reliability, provide only a portion of the information required to obtain a better understanding of the individual and can be administered either individually or in groups. Three commonly used personality tests are the Minnesota Multiphasic Personality Inventory (MMPI), the California Psychological Inventory (CPI), and the Edwards Personal Preference Schedule (EPPS). A brief review of these tests are found in Appendix F.

Personality inventories generally should not be included in a testing program of CETA clients. The administration, scoring and interpretation of these tests is extremely complex and requires a test administrator with a great deal of formal training and experience. Until the technical considerations of personality tests achieve the stature of cognitive measure, they should not be part of a test battery administered routinely in a testing program.

Work Samples

Work samples are designed to assess performance for a number of tasks representative of jobs required in a variety of occupations. There are four types of work samples according to the degree to which they correspond with actual jobs: actual job samples, simulated job samples, cluster trait samples and single trait samples. All work samples attempt to provide records of an individual's work performance and behavior. Some work samples provide clients with experiences they can readily relate to real jobs thus providing a means for vocational exploration. Other work samples are closely related to the Dictionary of Occupational Titles (DOT) or other job classification systems and thus may lend themselves favorable to training or job recommendations.

A number of work samples are commercially available either as separate packages or as part of a vocational evaluation system. Among those that may be useful for CETA clientel are the Comprehensive Occupational Assessment and Training System (COATS), the Micro-TOWER System, the Philadelphia Jewish Employment and Vocational Service (JEVS), the Singer Vocational Evaluation System, the TOWER System and the Valpar Component Work Sample Series. A brief review of these systems may be found in Appendix F.

The primary disadvantage to incorporating work samples into a testing program is that of economic feasibility. All of the systems are relatively expensive; some are very expensive. In addition, the time it takes to administer the entire battery ranges from twelve hours to three weeks. Although not every client would need to complete the entire system, administration time is a concern that must be considered. No one system will meet all the needs of a facility in terms of types of job skills examined, client population, and purpose of the evaluation. Work samples need to be integrated with other assessment techniques to provide a more comprehensive evaluation system.

SUMMARY

The development of a comprehensive testing or assessment program is an extremely complex process. The testing program needs to be formulated by a number of personnel including evaluators, counselors, classroom teachers and administrators. It must be responsive to the local conditions, local purposes, and local resources. Prior to selection of a particular evaluation program, the selection committee must be aware of the type of jobs available in the local labor market, the training opportunities available, the nature of the client population and the purpose of evaluation.

Because of the diversification of functions which the testing program may serve, and the wide variation of financial and professional resources available, the determination of a specific set of standardized tests useful for all prime sponsors is impossible. However the following set of priorities may prove useful in establishing a testing program.

With respect to standardized tests, an assessment program should minimally administer a multifactor aptitude test and an interest inventory. For noncollege-bound students, a vocationally oriented aptitude test such as the General Aptitude Test Battery (GATB) is appropriate. For clients with sound educational backgrounds an educationally oriented battery such as the Differential Aptitude Test Battery (DAT) may be useful. Although interests remain relatively unstable until late adolescence, interest inventories provide satisfactory reliable descriptions of interest patterns. Clients just beginning to think about the working world should be given inventories, such as the Kuder Preference Record, that evaluates interests in terms of general interest areas rather than providing ratings on specific jobs. A more job-oriented inventory such as the Strong Vocational Interest Blank or Minnesota Vocational Interest Inventory may be more useful of clients not planning to go to college and who will enter directly into the working world.

If achievement tests are to be used, a sequential approach to testing is advisable. Achievement test survey batteries can be used as preliminary screening devices. Individuals suspected of specific weaknesses then may be administered a single subject matter and/or diagnostic test in the area of suspected weakness. Such a program may be used to determine what remedial classes the client may need to take prior to a specific training program.

Personality tests should not be included in the routinely administered testing battery. Their use for vocational guidance can not be recommended. The administration, scoring, and interpretation of these tests are entirely too complex and the required training of the administrator too taxing.

Work samples provide a valuable supplement in the development of a comprehensive testing program. However, they must reflect the job opportunities and training opportunities in the local community. The initial cost of purchasing such a system may prove to be too much of a burden to the assessment budget. No one set of work samples will provide enough information for individual assessment. These work samples must be integrated with other assessment tools to provide a comprehensive assessment program.

Chapter 5

RECOMMENDATIONS

INTRODUCTION

The assessment is often an under emphasized component of prime sponsor activities. The preceding materials demonstrates a wide range of program designs. Some prime sponsors (and associated subcontractors) have developed assessment systems which are innovative and responsive to the environment of their operations. Others have only just begun to develop their comprehensive assessment systems. The characteristic common to most prime sponsors is the search for a better process with new tools.

One overall perception of the interviewing staff was dissatisfaction by the prime sponsor assessment specialists with at least portions of their systems. Based upon reactions of prime sponsor assessment staff coupled with research of assessment activity elsewhere, the following pages contain recommendations for the improvement of the assessment process of CETA prime sponsors (and associated subcontractors) in the Commonwealth of Virginia.

OVERALL ASSESSMENT MODEL

A diagramatic model of the overall assessment system recommended for implementation by prime sponsors is illustrated on the second page following. Presently no CETA agency contains all the components of the recommended model, but a few prime sponsor programs closely approach it in several component areas.

Four of the five components of the recommended model are shown as detailed models themselves (see Figures 1, 2, 3, and 4 following). Each of the five total components are described in the form of recommendations for actions. A final set of recommendations is provided for general or miscellaneous improvements in the assessment process.

(Note: Each of the five component areas on the Overall Assessment Model diagrammatic representation-Figure 1-is indicated by letters A-E and recommendations are presented in the same ordering).

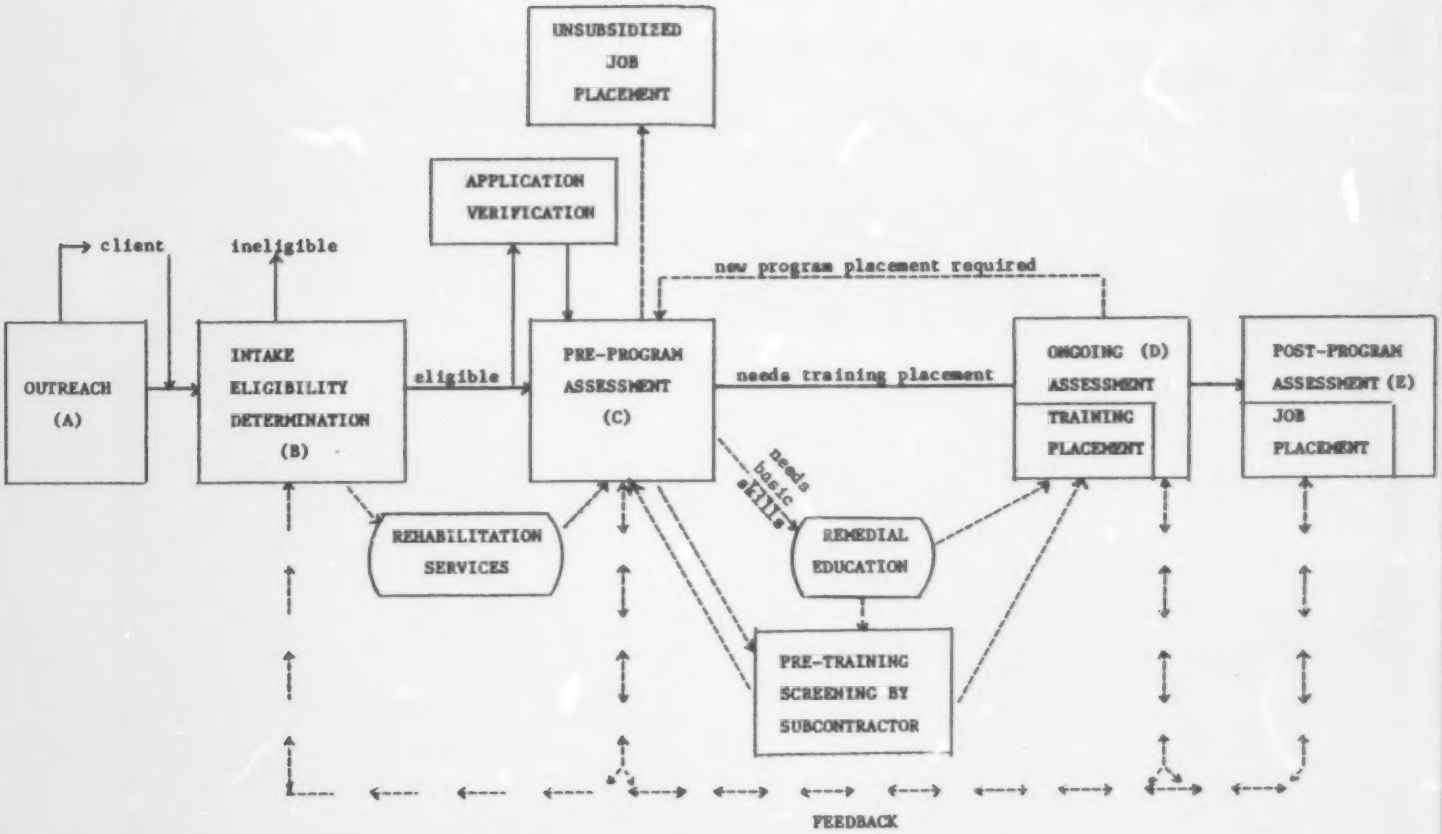


Figure 1. Recommended Overall Assessment Model

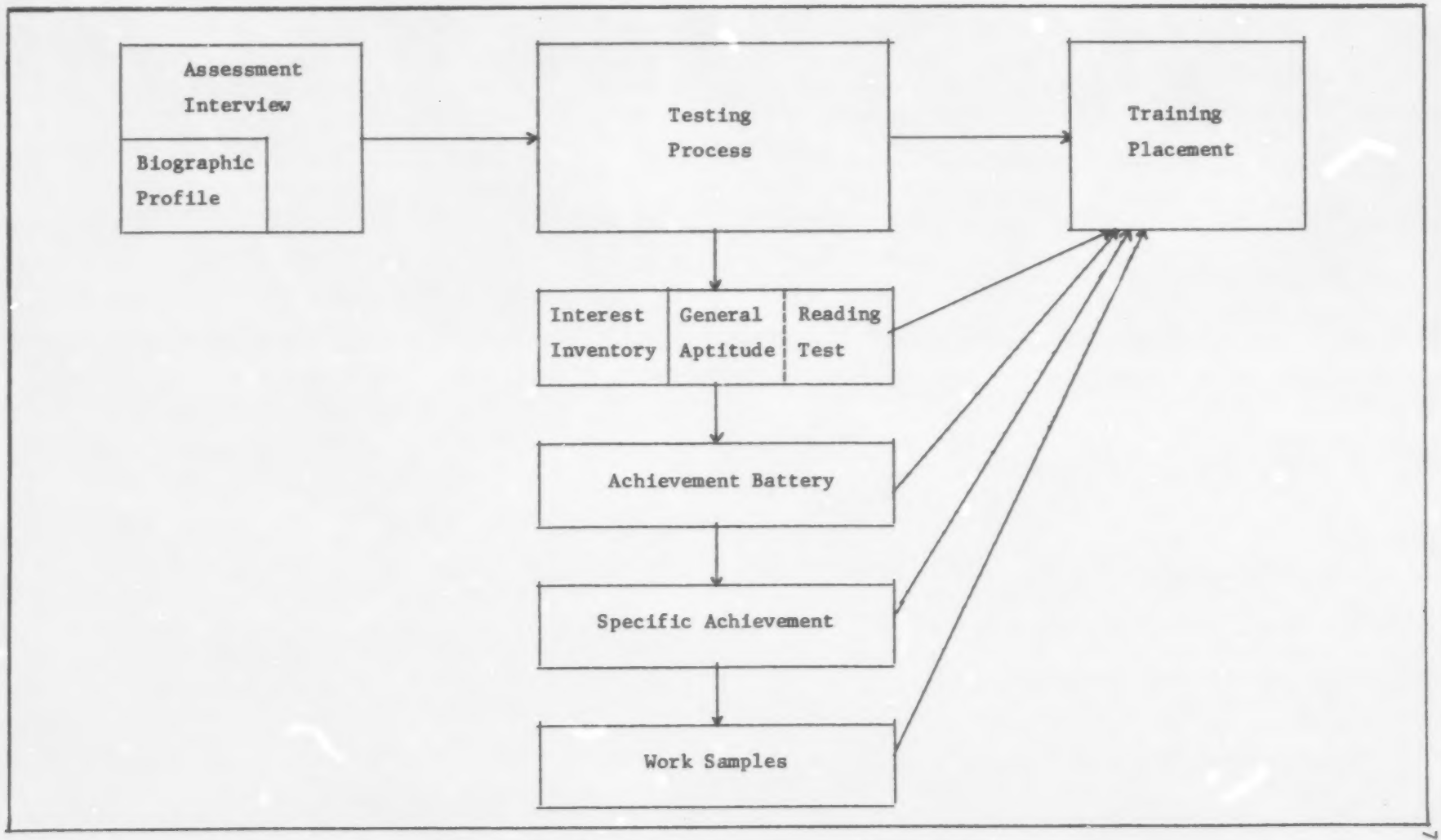


Figure 2. Pre-Program Assessment (Component C)

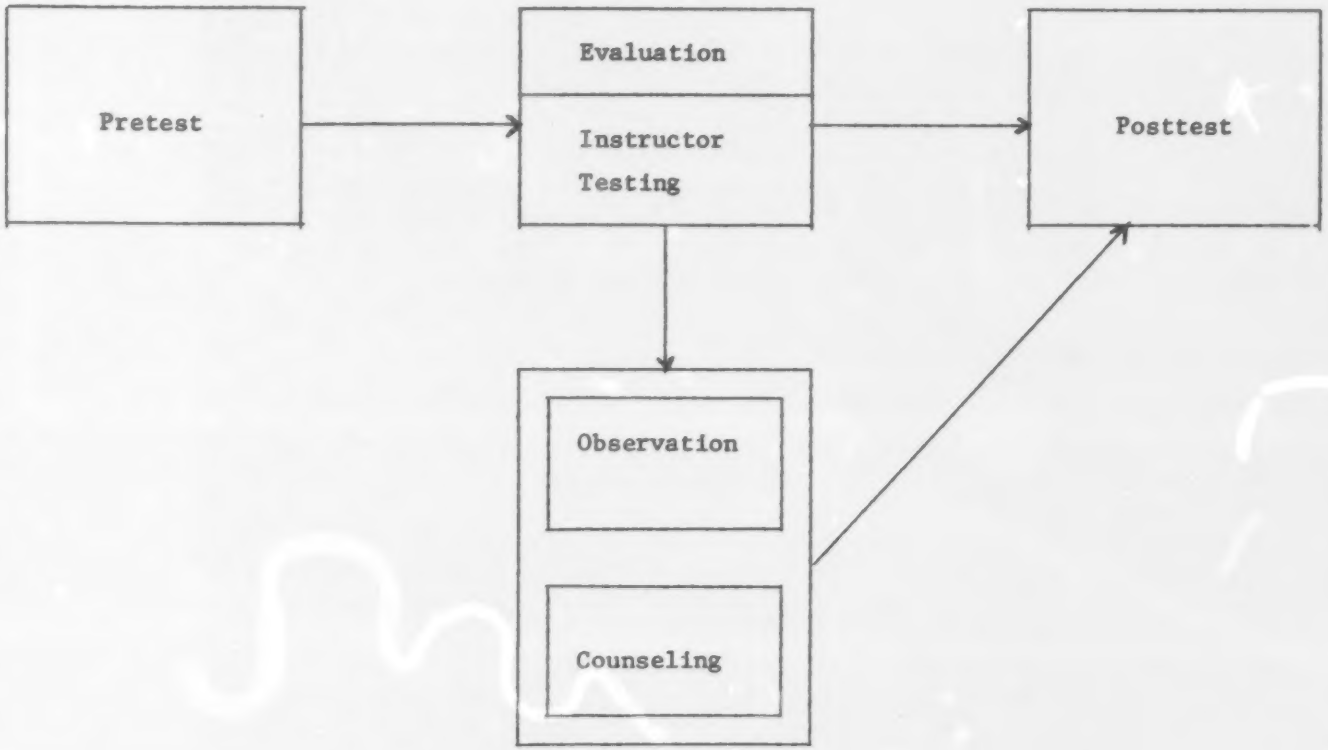


Figure 3. Ongoing Assessment (Component D)

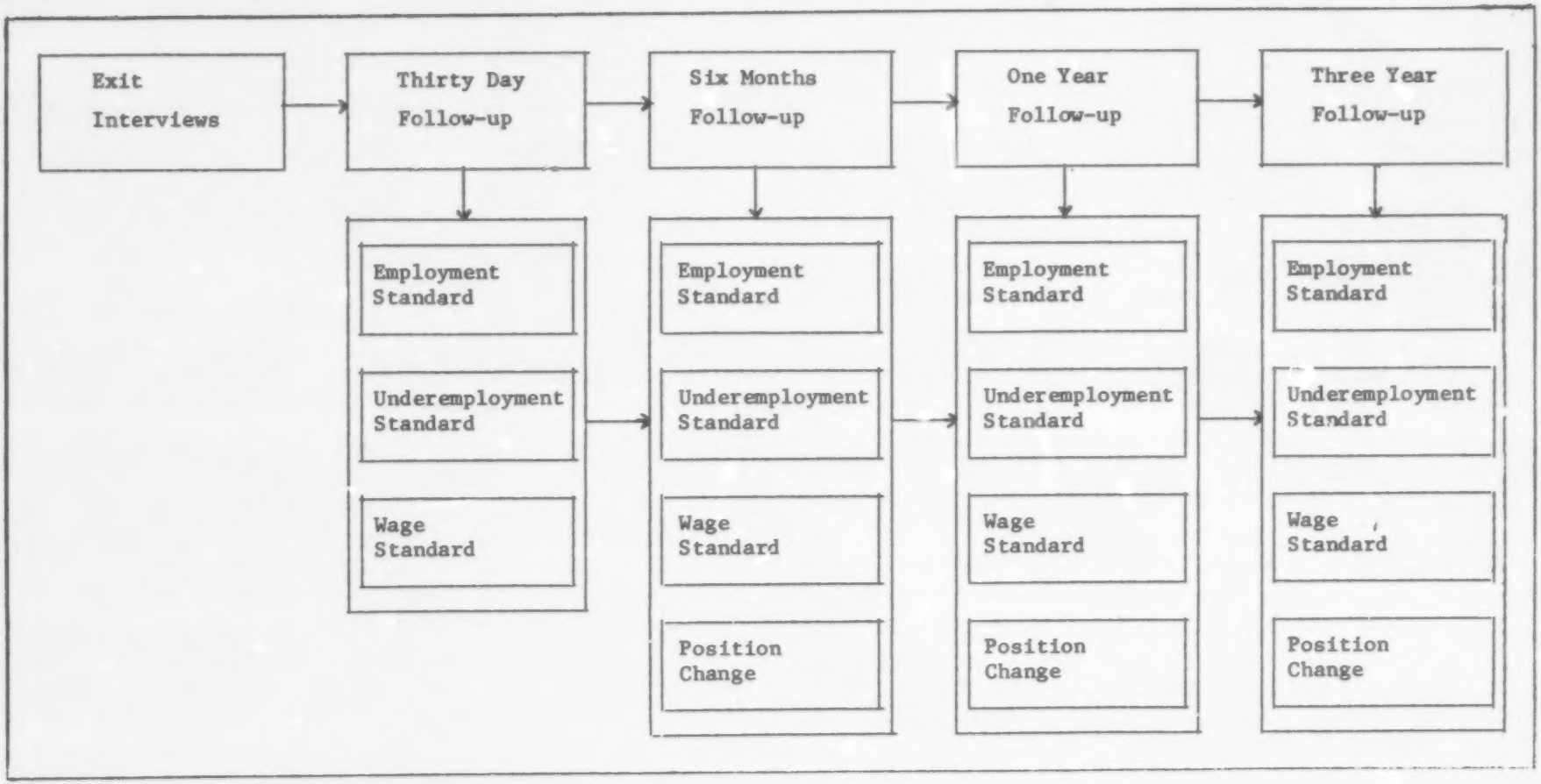


Figure 4. Post-Program Assessment (Component E)

A: OUTREACH

Outreach activities vary greatly from prime sponsor to prime sponsor, according to the normal flow of enrollees in the area served by the particular prime sponsor. For those prime sponsors utilizing, or those who may utilize outreach activities, the following recommendations should be useful.

A.1 *All community groups, including at least, public school counselors, Department of Social Services, Virginia Employment Commission, area Chamber(s) of Commerce, private employment agencies, church leaders, and citizen groups should be made aware of those CETA training programs and services available in the community.*

Action Suggested: Each prime contractor should prepare for routine distribution a comprehensive listing of training programs available through the prime sponsor. The listing should include at least these data: training program title, normal length of training (perhaps a range of possible times for some programs), name of subcontractor, location of training site(s), and normal future starting dates for programs. Such listing should be updated at least annually and preferably quarterly.

A.2 *Unique target populations should be identified and programs initiated to meet their needs.*

Action Suggested: Each prime sponsor's geographic area contains a unique population of potential clients. Program planning staff should identify those unique groups in the service area

and maintain an inventory of changing demographic trends. Some prime sponsors have identified working women or specific foreign-national groups as new client targets. Efforts must be directed at seeking information on new groups even if the potential success rate among such groups may appear minimal.

B: INTAKE/ELIGIBILITY DETEPMINATION

To ensure that intake activities are designed and operated as part of comprehensive assessment system, the Governor's Employment and Training Council should implement the following:

B.1 *Intake forms used by prime sponsors should be standardized to the greatest extent possible.*

Action Suggested: Currently prime sponsors use intake forms designed in response to their specific needs. Since most prime sponsors are presently collecting essentially the same information under different formats, standardized forms could be developed. The MIS system to be implemented in FY'81 is inadequate for this purpose because it is designed for a control rather than an assessment function.

B.2 *Intake managers at prime sponsors throughout the State should be more aware of the potentialities and limitations of the information gathered during the intake step.*

Action Suggested: GETC should sponsor an educational program bringing together individuals responsible for intake and pre-program assessment. The workshops should be designed for the

express purpose of improving the informational linkages between these first two steps of the assessment process. Information obtained at the intake step is used for both eligibility determination and pre-program assessment. Greater emphasis must be placed on collecting information needed to facilitate the pre-assessment function and not merely used for eligibility purposes. The professionals involved must jointly determine the information base to be developed.

To improve and increase the utility of intake services, prime sponsors should accomplish the following:

B.3 *Reduce the pivotal role played by intake services in the ultimate training program placement decisions.*

Action Suggested: Intake specialists should be discouraged from influencing potential program participants in their selection of a training program. Intake should be limited to its two chief objectives: (1) determination of eligibility under legislative and administrative guidelines; and (2) collection of supplemental biographical information for subsequent assessment and placement activities.

B.4 *Integrate intake services into a comprehensive assessment program.*

Action Suggested: Informational linkages between intake and the remaining phases of the assessment system need to be improved. Placing responsibility for all assessment under single managerial control would greatly facilitate development of a systems approach to participant assessment.

B.5 *Assure that all intake specialists utilize the standardized intake (registration) form presently provided for this purpose. (MIS form)*

Action Suggested: The standard form is currently available and prime sponsors should assure that it is utilized. Presently it is used by some and not by others.

C: PRE-PROGRAM ASSESSMENT

To ensure that pre-program assessment activities substantially increase the ultimate success of CETA activities throughout the Commonwealth, the GETC should undertake the following:

C.1 *Assist prime sponsors in the development of pre-program assessment designs.*

Action Suggested: A seminar bringing together the evaluators from prime sponsors and professionals experienced in pre-program assessment would be of considerable assistance. A number of prime sponsors (see Chapter 3, Table 1) have developed initial program design but they are in need of a critical professional evaluation of their proposals.

C.2 *Provide feedback to prime sponsors concerning the utility of pre-program assessment.*

Action Suggested: There is considerable enthusiasm throughout the Commonwealth for pre-program assessment. Yet there is little empirical evidence to suggest that pre-program assessment increases the probability of finding long term unsubsidized employment. A carefully designed evaluation of

new programs is essential in the early stages of implementation to determine their ultimate utility in improving placement success.

C.3 *Assist in the improvement of communication between private employers and prime sponsor pre-assessment personnel.*

Action Suggested: The information gathered during the pre-assessment step may be very helpful in the placement of participants in private sector training programs. For example, joint labor-management apprentice training programs in the construction industry should be a potential placement alternative for participants demonstrating the necessary talents.

C.4 *Employability Development Plans should be developed in a standardized fashion so as to facilitate comparability across prime sponsor programs.*

Action Suggested: As an initial step, a proposed standardized form should be developed for presentation to prime sponsors for critique in an effort to encourage the ultimate use of generally acceptable Employability Development Plan (EDP).

To improve their pre-program assessment activities, prime sponsors should implement the following:

C.5 *Develop their pre-program assessment activities complementary to other assessment systems in the community.*

Action Suggested: Each prime sponsor should develop with GETC financial assistance an inventory of assessment systems in the community served. Educational institutions, private

employers and rehabilitation agencies commonly have programs that could potentially complement those of a prime sponsor.

C.6 *Develop an inventory of potential unsubsidized jobs (and training opportunities - see C.3 above) in the community.*

Action Suggested: Clients demonstrating particular aptitudes/interests may be able to benefit from privately sponsored training or be placed in unsubsidized employment. Pre-assessment specialists and job developers should work through local Chambers of Commerce and personnel associations (American Society of Personnel Association chapters are in most larger cities) on a routine basis as well as the VEC to maintain a roster of such training and job opportunities.

C.7 *Employ the team approach to pre-program assessment.*

Action Suggested: A team consisting of a representative of the evaluation unit, a job counselor, and a job developer would improve the probability of successful participant placement. In particular, the early input by the job developer would help ensure that clients receive training for positions available in the labor market.

C.8 *Develop opportunities for feedback from other assessment units.*

Action Suggested: Pre-program assessment is a difficult and challenging activity. Feedback on client progress subsequent to pre-program assessment would assist staff members in the evaluation of present activities and the development of new programs to meet changing population demands. (Note dotted lines at bottom of Figure 1 preceding)

C.9 *Because of the widespread use of standardized tests by evaluators and the apparent limited knowledge of some of these evaluators concerning test selection, test administration, and test interpretation, the GETC should develop a training program designed to alleviate the problem.*

Action Suggested: A two-day workshop for evaluation/assessment specialists should be offered to disseminate information pertinent to pre-program assessment. This workshop should include guidelines for test selection, appropriate administration techniques and aids for accurate test interpretation.

C.10 *Provide the evaluation/assessment specialists with basic information on potential testing instruments useful for pre-program assessment.*

Action Suggested: A comprehensive listing of instruments currently used in evaluation facilities serving CETA participants should be compiled. This listing should include a brief summary, similar to those found in Appendix F, containing information necessary for test selection: purpose, validity, reliability, administration, scoring, cost, format, and interpretation of results as well as major strengths and weaknesses. A further listing of institutions having test files containing specimen sets should be compiled for each prime sponsor area. Such specimen sets would normally contain a copy of the test, instruction for administration and scoring as well as additional pertinent information which would aid in the selection process.

C.11 *Assessment specialists should be able to demonstrate that tests selected match the intended purpose of the tests.*

Action Suggested: The test selection process should be a cooperative effort; all professional staff who intend to use the test information must have some input into test selection. If the test is to be used by the training program instructor as a measure of pre-program knowledge, the test should be examined in relation to intended objectives of the class.

C.12 *Work samples to be used as a component of a comprehensive assessment program must be designed to reflect the job opportunities and training opportunities in the local community.*

Action Suggested: If the work samples currently available on the commercial market do not evaluate functional skills needed for local job opportunities, assessment specialists should develop localized work samples with the assistance of industrial firms seeking to fill specialized positions.

D: ONGOING ASSESSMENT

D.1 *Placement agencies should assume a more active role in the ongoing assessment process.*

Action Suggested: Presently, prime sponsors do not have a good understanding of the ongoing assessment techniques utilized by training instructors. Prime sponsors and training institutions should jointly develop instruments that will accurately measure a client's progress during training.

D.2 *The assessment services of each subcontractor should be evaluated and integrated into the overall assesement process.*

Action Suggested: Prime sponsors should require that regularly scheduled written evaluations be completed by training instructors and submitted to the job counselors. Ongoing evaluation procedures should be developed by the prime sponsors, with emphasis on pretest/posttest designs.

D.3 *A more formalized ongoing assessment system is needed so students would be kept aware of skill development shortcomings, within the ongoing assessment process, as well as changes that might occur in the labor markets.*

Action Suggested: As clients are progressed through the ongoing assessment program, they should be made aware, via progress reviews, of their skill deficiencies or inadequacies. To accomplish this, client progress reviews should be conducted on a regularly scheduled basis, e.g., every week, twice a month, once a month, etc. During this client progress review, the student should be apprised of the current labor market situation concerning their field of endeavor. If there have been drastic changes in the labor market concerning their skills training area, then re-evaluation of their training plans should be conducted. In order to have a high quality ongoing assessment program each prime sponsor should make the actual assessment process more formalized, e.g., specific rules and regulations established and adhered to, progress reviews conducted at frequent intervals, etc.

Team assessment is encouraged for it allows the instructor, client, job counselor, and job developer to come together to assess a client's progress. In addition, it encourages feedback between all essential units involved in the assessment process.

E. POST-PROGRAM ASSESSMENT

E.1 *Prime sponsors should conduct a personal exit interview with each client upon completion of training. If a personal interview is not possible then the administration of a post-exit questionnaire is recommended.*

Action Suggested: The administration of an exit interview would provide an excellent opportunity for obtaining client feedback concerning all aspects of the CETA process. Upon completion of the training sequence, the job counselors should invite each client to express his/her feelings concerning any aspect of the CETA program from the time of initial application through the experience. An assessment of each client's perceptions concerning each stage of the process should be solicited. Pertinent questions might include: (1) what problems did the client encounter during the intake and pre-assessment stages; (2) did the client feel that pre-program assessment accurately identified his/her occupational interests and potentialities; (3) was the training program one that the client found to be both desirable and useful; (4) was the quality of the training received and the counseling

adequate; and (5) were the job placement activities efficient and effective. Although many of these questions might be asked and responses obtained during the course of the training program, it is still advisable to solicit client responses after the completion of training since attitudes tend to change with experience.

E.2 *Post-program assessment activities need to be developed and/or be strengthened.*

Action Suggested: Post program assessment should be conducted with all applicants on a longitudinal basis. It is recommended that client follow-up be conducted thirty days, six months, one year, and three years after the completion of training. As a minimum, information gathered during post-program assessment should include: (1) an employment standard; a determination as to whether or not the client is employed should be made at each particular interval; (2) an underemployment standard; an assessment as to whether or not the client is employed in a position for which he/she was trained should be made; (3) an earnings standard; an assessment to determine the client's current salary status and earnings potential; and (4) a position change standard; a determination as to whether or not the client has received a promotion or positive position change.

This information might be obtained either by phone contact with the client and his/her employer or by a mail questionnaire sent to the client and his/her employer. If a mail questionnaire

is utilized, a self-addressed stamped envelope should be included in order to facilitate a higher return rate.

E.3 *Results of post-exit interviews and client follow-up activities should be compiled and distributed to each unit involved in the assessment process.*

Action Suggested: The results of post-program assessment activities should be compiled and put into report form. Copies of the report should then be distributed to every unit participating in employee assessment. The information provided in this report should provide feedback for which each unit can assess their relative effectiveness. This should help ensure that successful activities be continued, and problem areas modified.

F: GENERAL/MISCELLANEOUS ASSESSMENT ISSUES

Various conclusions of the research team do not fall specifically into one of the preceding categories. Most of these remaining recommendations are directed at the Governor's Employment and Training Council.

F.1 *The Governor's Employment and Training Council should provide more opportunities for training in order to develop a proper understanding of the assessment function.*

Action Suggested: GETC should contract for development of three training programs: (1) For prime sponsors only (executive directors and chairman of advisory council) - one day to learn about latest techniques in assessment . . . an effort to "sell" the prime sponsor on instituting change; (2) For

heads of evaluation/assessment programs plus subcontractor representatives specializing in assessment - one day on latest techniques of assessment with emphasis on building improved linkages between the two groups; (3) For "in-house" consultation with each prime sponsor--two day maximum assistance with implementing improvements in assessment process. (Should come after both (1) and (2) preceding have been completed).

F.2 *Prime sponsors must place more emphasis upon feedback between the various stages of the assessment process.*

Action Suggested: Currently pre-program assessment units do not receive information concerning a client's training program and post-program progress. Information concerning a client's progress both during and after the training program is essential for evaluating the success of pre-program placement. The type of information flow necessary to the efficient functioning of feedback is illustrated in Figure 1. Each prime sponsor should develop appropriate mechanisms to assure that pre-program assessment specialists learn about progress of clients in training and their experience in the post-training period. Such feedback will assist the earlier assessment specialists in the improvement of assessment actions.

F.3 *The GETC should develop, in conjunction with the prime sponsors, greater professional skills among assessment specialists.*

Action Suggested: Minimum qualifications for assessment personnel should be developed. GETC should arrange for "upgrading"

workshops to assure a minimal level of assessment skills for existing assessment personnel. Future hires in the assessment classifications should come from a labor pool of persons meeting the minimal qualifications identified for the respective assessment position.

F.4 *Sharing of assessment resource expertise throughout the community is encouraged.*

Action Suggested: Prime sponsors should take the initiative of developing an inventory of professional assessment services available in the community. An initial step in the development of such inventories is provided in Appendix D, "List of Institutions of Higher Education" and "Sources of Technical Guidance on Testing and Measurement in Virginia."

F.5 *Prime sponsors should conduct self-studies of their assessment process and practices in light of the total recommendations presented in this Report.*

Action Suggested: Each prime sponsor should work with (1) a GETC member, (2) a representative of a Virginia institution of higher education, and (3) a representative of each type of subcontractor utilized by prime sponsor to appraise the prime sponsor's overall assessment process. The report of each of these task forces should be the focus of planned change by the prime sponsor.

F.6 *A periodic interchange of assessment technique experiences should be developed.*

Action Suggested: The GETC or an informal grouping of prime sponsors should arrange an annual meeting of assessment specialists to be held at a Virginia institution of higher education. The program should be arranged with a dual format: (a) assessment professionals from institutions of higher education as speakers on key issues of the practitioners; and (b) roundtable discussion sessions whereby each type of assessment specialist would discuss problem areas faced by that category (i.e., pre-assessment, ongoing assessment, post-assessment) of assessment specialists.

APPENDIX A

MANAGEMENT PLAN AND SCHEDULE

MANAGEMENT PLAN AND SCHEDULE

	Task
October 1	1.1 Staffing and Organization. This task will involve final hiring of staff members, establishment of specific job descriptions, location of the project, and other administrative details.
December 15	2.1 Literature Review. The literature review will focus on obtaining the most current publications in the area of assessment and testing. Primary resources will include educational assessment material as well as systems being developed and use in private industry. Government and university research will also form a substantial portion of the documents obtained. An overview of the broad principles common to most survey research will also be obtained.
December 1	2.2 Institutional and System Indentification. Telephone contact with follow-up written correspondence with prime sponsors and balance-of-state agencies will be the

primary method of identifying institutions and agencies involved in the assessment of prime sponsor program participants. Additional contact with state agencies and secondary and post-secondary institutions will be made if necessary. Information collected by the research team at this time will include minimal programmatic content. It will primarily include the identification of educational institutions involved in assessment activities with the prime sponsor and the various systems being employed.

January 1, 1980

2.3 Quarterly Report to GETC Staff. A regular quarterly report will be prepared for the GETC staff on the progress of the project.

February 15

3.1 Survey Development. Based on the principles established in the literature review and the special expertise of the project staff, a survey will be developed that will: (a) identify present assessment systems being used by prime sponsors and educational institutions for prime sponsor program

participants; (b) the rationale for chosing these systems; (c) perceived technical needs in the area; and (d) perceived uses and effectiveness of standard assessment systems available. The proposed survey instrument will be developed in conjunction with and reviewed and refined by outside consultants, and subjected to informal field testing. A finished survey instrument will be submitted to the GETC staff for final approval.

April 15

3.2 Survey Distribution. The survey instrument will be mailed out to the universe of prime sponsor and educational institutions and agencies identified in Task 2.2. Follow-up mailings and telephone requests will be used to insure a good response rate. Along with the surveys will go a request for documents about the programs. The research team will be involved in this task along with a considerable amount of secretarial work. The most significant non-personnel resources for this task will

be those generally used in mail survey research, postal services and copying services.

April 1 — 3.3 Quarterly Report to GETC Staff. A regular quarterly report will be prepared for the GETC staff on the progress of the project.

May 30 — 3.4 Follow-Up and On-Site Interviews. To insure adequate response to the survey a follow-up will be conducted using a combination of telephone and mail contacts. Upon receiving completed questionnaires necessity may warrant a number of personal interviews and limited on-site visits to complete all necessary documentation and data collection.

July 1 — 3.5 Quarterly Report to GETC Staff. A regular quarterly report will be prepared for the GETC staff on the progress of the project.

September 1 — 4.1 Final Analysis. The final analysis will be accomplished by the research staff who will produce a state-of-the-art report including the generalizations of the survey items enumerated in

Task 3.1. With the help of outside consultation, final analysis and recommendations will be synthesized into guideline form in a Final Report that can be used by practitioners in the field seeking information and procedural help in the area of program participant assessment.

September 30

4.2 Final Report. Upon completion of the final data analysis, a report incorporating the end products of the study described in the Research Plan will be compiled into a document that can be used by the GETC in analyzing the currently used assessment systems in the state. This report will also be of use to prime sponsors in planning future coordinative efforts with educational institutions in the area of assessment.

APPENDIX B

PERSONNEL CONTACTED AND INTERVIEWED

PERSONNEL CONTACTED AND INTERVIEWED

ALEXANDRIA ECONOMICS OPPORTUNITIES COMMISSION

Toni Gage - Intake and Evaluation

ARLINGTON COUNTY MANPOWER ADMINISTRATION

Gerald Gordon - Director
Wade Morrison - Director - Arlington Skills Center
Kathy Lough - Evaluator - Arlington Skills Center

BALANCE OF STATE

Elizabeth Kaplan - Senior Evaluator

HENRICO-HANOVER-CHESTERFIELD CONSORTIUM

Ann Stone - Supervisor - Evaluation Unit

NORTHERN VIRGINIA MANPOWER CONSORTIUM

Kathryn Woodward - Assessment Unit
Bernie Blankie - Director - Fort Belvoir Skills Center

PENINSULA OFFICE MANPOWER PROGRAMS (POMP)

Curt Johnson - Supervisor - Program Review and Assessment
William Sullivan - Peninsula VEC/CETA

PRINCE WILLIAM COUNTY MANPOWER PROGRAM

Dawn Hunt - Manpower Operation Coordinator

RICHMOND AREA MANPOWER PLANNING SYSTEM (RAMPS)

Claire Velzy - Educational Diagnostician - Dept. of Developmental Programs
Bonita Woodson - Counseling & Assessment Unit - Opportunities Industrialization Center (OIC)
Bernice Thompson - Operation Manager - Richmond Community Action Program
Ralph Leech - Coordinator - Special Projects - Private Industry Council (PIC)

ROANOKE - FIFTH DISTRICT EMPLOYMENT AND TRAINING CONSORTIUM

B. L. (Robbie) Robinson - Manager
Bobby Clark - Monitor Unit Supervisor

SOUTHEASTERN TIDEWATER AREA MANPOWER AUTHORITY (STAMA)

Jeff Brown - Evaluation Officer
Mr. Simmons - Intake and Assessment - Tidewater VEC/CETA
Faye Adams - Employment Counselor Supervision - Tidewater VEC/CETA
Kathryn Powers - Job Development Coordinator - Tidewater VEC/CETA

APPENDIX C

SUMMARIES OF PRIME SPONSOR's ASSESSMENT PROGRAMS

CITY OF ALEXANDRIA

OVERVIEW

Assessment and evaluation activities at the City of Alexandria do not constitute a major program activity. Like many of the other prime sponsors throughout the State, Alexandria has only recently begun to upgrade this segment of their overall program.

Begining in the fall of 1981 CETA participants will be exposed to the Comprehensive Occupational Assessment and Training System (COATS). Administered by the Alexandria public schools the COATS system is a series of non-paper and pencil tests designed to determine client interest and work experiences. Because it does not test basic educational attainment it is generally administered in conjunction with the ABLE test.

The COATS and ABLE testing combination is just begining and no information is available concerning its overall utility.

INTAKE AND PREASSESSMENT

Intake at Alexandria takes place at the prime sponsors office. Participants are initially appraised of their eligibility by an Intake Aide. If the eligibility requirements are met, the client next meets with the Intake and Assessment Counselor. As currently operated, it is at this meeting that the Employability Development Plan (EDP) is developed. Criteria for placement in a particular program reflects client preferences, training position availability, and the subjective evaluation of the intake counselor.

In an attempt to upgrade their preassessment activities, Alexandria has recently developed a program in conjunction with the

public schools for administration of the COATS system. As currently proposed, all clients except those enrolled in Basic Education or GED programs will participate. Subsequent to the testing with COATS, clients will return to the prime sponsors office to develop an EDP with the Intake and Assessment Counselor. Before entering a training program the client will again meet with the counselor for orientation to the training program and the prime sponsor's support activities.

In addition to the COATS system various subcontractors administer their own program specific evaluation instruments. The National Business School, for example, requires some basic pretesting as does Control Data Institute.

ONGOING ASSESSMENT

At Alexandria ongoing assessment is left exclusively up to the subcontractor. The prime sponsor does make available counseling by an Employment and Training Specialist, but contact between the participant and the counselor are not regularly scheduled. Formal contact between the participant and the counselor is initiated only in the event of a problem following the initial placement services.

POST ASSESSMENT

Alexandria does not currently conduct a post assessment of client success in the various training programs. There are no plans at present to develop a post assessment program.

ARLINGTON COUNTY

OVERVIEW

The Arlington County Manpower Administration provides the most comprehensive assessment and evaluation program currently employed by any prime sponsor within the Commonwealth. A large portion of the assessment and evaluation program is contracted to the Northern Virginia Skills Center. The Vocational Assessment Center, located within the skills center, is jointly operated by CETA and the Special Education division of the local school system. This unique relationship between CETA and the public school system has provided the opportunity of cost sharing, thus considerably reducing the financial burden for such a center.

The majority of CETA participants receive classroom training at the Northern Virginia Skills Center or the Center for the Foreign Born. Approximately 220 CETA participants are enrolled in various open entry, open exit programs such as: (1) auto mechanics; (2) building maintenance; (3) clerical skills; (4) cosmetology; (5) data entry; (6) english as a second language; (7) health-related training; and (8) printing.

INTAKE AND PREASSESSMENT

Intake services for Arlington County are handled directly by the Northern Virginia Skills Center. The primary purposes of the intake process are to determine an enrollee's CETA eligibility and to check for minimum standards of english speaking ability. The intake process is centered around an interview between an intake specialist and the client. It is during this interview that the intake specialist makes

a judgement concerning the client's english skills and completes a participant application form. If the participant has a suitable level of english proficiency and is determined to be CETA eligible, he/she is referred to the Vocational Assessment Center located at the Northern Virginia Skills Center for preprogram assessment. If a client's english is not sufficient for assessment at the Vocational Assessment Center or program placement and he/she is CETA eligible, he/she is sent to the Center for the Foreign Born for preprogram evaluation. If the client brings the necessary information to the intake interview (identification, social security card, and an income statement for the past six months) CETA eligibility can be determined immediately (one day) and the client is referred to preprogram assessment.

Preprogram assessment activities for Arlington County are subcontracted to the Vocational Assessment Center located at the Northern Virginia Skills Center. Preprogram assessment practices vary widely depending upon particular client interests and backgrounds. If the client is certain of the program that he/she desires, evaluation is limited to the assessment specialist verifying the client's application to determine whether or not the client has the background sufficient for entering the desired program. In these cases, the assessment process is likely to be completed within one day.

If the client is not certain of which program he/she desires, a variety of testing instruments might be utilized. In these cases, preprogram assessment may last as long as two to three weeks, with the average time being two to three days. The instruments commonly used by the Vocational Assessment Center include: (1) the Adult Basic Learning Examination (ABLE); (2) the Wide Range Interest Opinion Test

(WRIOT); (3) the Picture Inventory Exploration Survey (PIES); (4) Microtower Work Samples; (5) Vitas Work Samples; and (6) Valpar Work Samples.

While assessment procedures will vary according to each client's particular needs, interests and background, the general procedure is to first administer the WRIOT to all participants. The WRIOT is an interest inventory which is designed to give the client and the assessment specialist some direction as to potential occupational interests. The major reason the WRIOT is utilized and chosen over other evaluation instruments, is that it requires no particular level of reading skills, and can be administered to most clients, including the foreign born. Also, the WRIOT can be self-scored, so there is no extensive waiting period for results. Once some particular interests have been identified, the client is likely to be tested on one or more of the work sample systems indicated above. Testing on the work sample systems provide the client and the assessment specialist an evaluation to whether or not he/she has the aptitude and/or dexterity to pursue a particular program. Furthermore, work sample systems are useful in that they present a form of "job preview" to the client. Thus, the client can make a determination as to the perceived attractiveness of certain occupations.

Upon completion of the assessment process, the assessment counselor completes Part I of the Employability development Plan (EDP). On Part I of the EDP the assessment counselor records general observations taken during the interviews and testing and test results of the various work samples and interest inventories administered. Once the assessment counselor and the client agree upon a particular program, the

client and Part I of the Employability Development Plan are referred back to an intake specialist. The intake specialist examines the slots available and completes the Employability Development Plan referring the participant to pre-vocational training, classroom training, or on-the-job training.

ONGOING ASSESSMENT

Ongoing assessment activities for Arlington County are subcontracted to the educational institutions. For clients placed at the Northern Virginia Skills Center, ongoing assessment is conducted by the program instructors and an employability team, which consists of the instructor, job counselor and job developer. Individual instructors are required to submit bi-weekly status reports on each participants progress. These reports then become the center of employability conferences which are scheduled every two weeks. During these conferences the progress reports are discussed with the participant by the employability team. During these meetings the participant has the opportunity to provide critical feedback concerning any aspect of the program. Participant expectations and job goals are explored and determination of the type of employment and when to seek this employment is made. In addition to the scheduled employability conferences, counseling is always available to the client by the job counselor. When the assessment team determines the client to be job ready, the job developer will refer the participant to various position openings.

Ongoing assessment activities at training facilities, other than the Northern Virginia Skills Center, vary widely. Each of the training subcontractors are given wide latitiude as to how to evaluate clients.

on an ongoing basis. However, most of the educational programs use some form of testing by which a participants progress can be recorded. For example, in the program of biomedical electronics and business machine electronics at George Washington University, midterm reports are provided to the clients which includes grades and comments by the instructors. If special problems arise counseling is available to the client. Participants taking computer related programs at Control Data Institute must take tests on units within a prescribed time frame to maintain academic eligibility. If this is not done, the client is then counseled in the incomplete unit. Also, continuous observation and feedback is provided by the instructors.

POST ASSESSMENT

The prime sponsor is responsible for initial follow-up thirty days after a participant completes training. Currently, post-program assessment is conducted in an informal and unstructured basis. There is some phone contact made with either the client or the client's employer to determine their current job status. However, most of this contact is done on an unscheduled basis. Generally post-program assessment includes such indices as percent completion, percent finding class related jobs and percent of unemployment.

BALANCE OF STATE (BOS)

OVERVIEW

The Balance of State prime sponsor's evaluation activities are unique in comparison to the evaluation activities of the other prime sponsors. The primary activities of the prime sponsor's evaluation unit center around asssing the program effectiveness of the regional operations centers (ROC) in terms of planned performance. For example, quarterly performance reviews of all participant training programs are conducted. The quarterly, evaluation is done for each ROC office and examines three primary performance criteria, which include: (1) planned versus actual program enrollments; (2) planned versus actual placement roles; and (3) planned versus actual budget expenditures. The evaluation unit then totals the performance of all the ROC'c to arrive at an overall assessment of BOS performance. The BOS evaluation unit also tabulates performance indicators for each title/program. Performance indicators examined include: (1) positive termination rate; (2) entered employment rate; (3) cost per participant; (4) cost per entered employment; and (5) comparative enrollments of selected target groups. Thus, the BOS evaluation unit is far more concerned with program evaluation and monitoring of ROC performance, than with participant assessment.

The Balance of State prime sponsor had conducted some rather detailed evaluations of selceted programs. For, example, an extensive evaluations of selected programs. For example, an extensive evaluation was completed for the FY '79 Summer Youth Employment Program (SYEP). Included in the evaluation was a survey of participants, with

solicited the client's reaction towards the program. Also, an evaluation of the FY '80 Youth Community Conservation Improvement Projects (YCCIP) was conducted with essentially examined contractor performance and participant characteristics.

It should be emphasized that while the BOS prime sponsor os responsible for the participant assessment process, it grants a great deal of latitude to the VEC in handling this function. The BOS prime sponsor has virtually no participant contact. Although, the BOS does have access to a folder on each contract and on each participant through the ROC's, this information is only examined for selected post-program evaluations and reports to the Department of Labor on participant characteristics.

INTAKE AND PREASSESSMENT

Intake is conducted by the VEC, which is responsible for completing the participant intake form and assessing whether or not the client is CETA eligible. The local offices of the VEC utilize a standard participant intake form which was designed for input into the forthcoming automated Management Information System(MIS). Upon completion of the intake eligibility certification process, if the client is CETA eligible, the VEC is responsible for pre-program assessment and program placement. All initial interviews, counseling, testing, and completion of employability development plans are handled by the local offices of the VEC. The evaluation unit of the BOS prime sponsor has limited direct knowledge as to how various VEC local offices handle the intake and preassessment process.

ONGOING ASSESSMENT

Balnce of State operates three types of training programs under Title II-B. These include skills centers, where all training programs consist entirely of CETA participants; class size projects where one training class (i.e., at New River Community College) consists of CETA clients; and individual referral programs where CETA clients are sent to training programs open to the general public (i.e., Control Data Institute). Regardless of the type of program a client is enrolled into, ongoing assessment and counseling are conducted primarily by the subcontractor. In some individual referral programs the VEC does provide some counseling. Also, all clients do have some contact with VEC counselors although the extent of this contract is uncertain.

Job placement is handled by the job counselors of the VEC, who assist the client in finding suitable employment.

As with the case of intake and preassessment, the BOS evaluation unit has little direct contact with the ongoing assessment procedure, and have little knowledge concerning local VEC office procedures.

POST ASSESSMENT

Under the existing agreement with the VEC a ninety day follow-up is supposed to be conducted by the VEC job counselors.

There are plans by the BOS prime sponsor in FY '81 to initiate a follow-up system to track participants' post CETA experiences in the labor market. The purpose of the information collected will be to provide feedback as to how well the prime sponsor and the subcontractor are doing inpreparing participants to obtaining unsubsidized employment

or in developing skills that enhance their employability. The responsibility for this follow-up will be with the prime sponsor and not the subcontractor. The information necessary to conduct such a follow-up will be available from a Standard Participant Termination Form which will be part of the forthcoming automated management information system (FY '81).

While exact procedures for the post-evaluation have not been finalized, it is anticipated that a sampling of participants will be contacted either by phone or means of a mail questionnaire. The minimum of information to be gathered will include: (1) current labor force stutus; (2) current or last hourly wage; (3) current or last employer--name, address, phone number; (4) current or last job and whether this is a promotion or change from the last reported job. The frequency or the duration of contact for the post-assessment has yet to be determined.

HENRICO CONSORTIUM

OVERVIEW

Henrico is a relatively small prime sponsor located in the Richmond Area. For FY-79 approximately 510 individuals were placed in Title II-B Programs. The clientele of Henrico is somewhat unique in that 60 percent of the applicants have a high school diploma or higher. Another 20 percent of the clients have at least an eleventh grade education.

The number of programs offered is not extensive. The primary programs include: (1) clerical-accounting; (2) cosmetology; (3) technical-most trades; (4) computer technology; and (5) various individual referral programs.

INTAKE AND PREASSESSMENT

The initial step of the intake and preassessment process is the completion of a client information sheet. This information sheet is filled in by an intake person during an interview with the client. If the client brings in the proper information, CETA eligibility is determined during the intake interview. If the client is determined to be CETA eligible, then an appointment is scheduled with a job counselor. Generally, appointments are scheduled within one week of the intake interview. As part of this process, a complete verification is done to make sure the information the client gave the intake interviewer was correct. However, a client's progress through the preassessment sequence is not contingent upon the completion of the verification process. The client continues through the preassessment

activities while the verification process is pending.

The second step is an interview between the client and a job counselor. If the client is certain in which program he/she would like to be placed, and the job counselor concurs, then placement into a program may be arranged. If the client is uncertain as to which program he/she desires, or the counselor needs further information the case is reviewed by an assessment committee.

After the first client/job counselor interview, any case in which proper program placement is not clearly indicated, is reviewed by an assessment committee. The assessment committee consists of the evaluator, the job counselor, and the job developer. The job developer is active in assessment to make sure the client is placed in a sequence that is likely to lead to employment. The committee reviews each case and collectively determines a program sequence for the client or determines that further assessment is required.

After a client's case has been reviewed by the assessment committee another interview takes place between the client and the job counselor to discuss the findings of the review committee. Placement might have been recommended or further asssesment may be required.

If the counselor and the assessment committee cannot ascertain the proper training sequence from the client's background information, and/or the client has no idea what program he/she desires, testing may be scheduled. When testing is conducted, either the GATB, WRIOT, or ABLE is administered. The determination as to which test(s) a client receives is strictly situational based upon the needs of the client. For example, if a client does not know where he/she should be placed a

GATB is given. An ABLE might be administered to verify that a client meets the minimal educational requirements necessary for entering a program.

There is a philosophy at the Henrico Consortium that testing is not required for proper client program placement. Because the clientele of the consortium has a relatively high level of education, and usually has some degree of work experience, testing is kept to a minimum.

The interviews/test scores result in an employability plan developed by the job counselor and the assessment committee. The EDP is reviewed every sixty days.

Preassessment ends with the development of the employability plan and initial placement. The exception is where subcontractors administer a pretest or entrance examination. The information gathered by a subcontractor in preassessment activities is given to the prime sponsor.

ONGOING ASSESSMENT

Evaluation in terms of course content and client skill acquisition is handled by the course instructors in classroom situations, and by work-site supervisors in work experience programs. Henrico consortium does require a formal written evaluation by the instructor or worksite supervisor every 60 days.

The extent of ongoing participant assessment coordinated by the prime sponsor is as follows:

1. Scheduled client/counselor meetings. The frequency of these meetings varies with the program. For example, in a 2 year program meetings might be held every 30 days, while in the

three week truck driving course, meetings are held each week. Clients have the opportunity to provide feedback concerning any aspect of the programs at these meetings.

2. Participants in all programs are monitored after thirty days. A job counselor will go to the school and ask the instructor how the student is doing up to this point. Information is recorded on a standardized form and is kept with the client's file. If the program is of short duration, then the monitoring process will be initiated after an appropriate time interval.
3. Each instructor or worksite supervisor must complete a formal written evaluation of each client every sixty days.
4. Sixty day review of each client's employee development plan by the job counselor.

POST ASSESSMENT

There is a 30 and 90 day follow-up, handled strictly by telephone. Also included is a follow-up program for non-positive clients to let them know the services that are available.

NORTHERN VIRGINIA MANPOWER CONSORTIUM

OVERVIEW

The Northern Virginia Manpower Consortium (NVMC) is a federally funded program mandated under the Comprehensive Employment and Training Act (CETA), to aid the unemployed, underemployed and economically disadvantaged. This aid is provided through training and employment opportunities that are geared towards entrance into unsubsidized labor markets. The programs offered are many, ranging from automotive mechanics cosmetology.

INTAKE AND PREASSESSMENT

The intake and preassessment process involves many steps which are described below. It should be noted that the sequence to be summarized is followed by all clients, regardless in which program they are eventually placed.

The initial step in participant assessment begins with intake and registration. Once a client sets up an appointment with the intake unit, the client is sent a list describing what materials should be brought to the interview. Materials such as a birth certificate and proof of family income help speed the intake process. NVMC does not use the standard intake form to be used in the CETA management information system. The present intake form is twelve pages in length and is filled in by the intake interviewer. Once registration is complete and the information is verified, if the client is CETA eligible, a series of vocational tests are scheduled. No tests are given prior to the determination of CETA eligibility. The verification period is short if proper

materials are brought in. One to two week waiting period is usual before testing begins.

The second step of the assessment process involves the administration of a series of vocational tests. All new clients are administered the General Aptitude Test Battery (GATB) and the Adult Basic Learning Examination (ABLE). If a client's English grammar is sufficiently poor that the GATB and the ABLE are impossible to administer then the Davis English Language Competency test is given.

The principal reasons for selecting the GATB and the ABLE are ill-defined. The tests were in use prior to the employment of the present assessment staff, and these tests have continued to be used. The principal reason for keeping the two tests is the lack of time in investigating and implementing new ones. There was an expressed dissatisfaction with both tests. The evaluator felt that the ABLE was culturally biased, because the results are highly reliant upon good English grammar. The dissatisfaction surrounding the GATB was just that it had been in use too long. Many clients were too familiar with the GATB prior to administration.

The third step is an interview between the client and the evaluator to discuss tests results and client interests. On the basis of the test results and the interview, the evaluator makes recommendations in regards to placement. These recommendations are noted on the Employability Development Plan (EDP).

An EDP is completed for each client. It contains the following information: (1) background information on the client; (2) interview summary and a summary of test results; (3) a listing of client barriers to employment and recommended actions; and (4) a transition plan.

The initial stages of developing the EDP are conducted by the evaluator. The evaluator conducts an interview with the client after the test scores are obtained, at which point, the evaluator obtains the necessary background information and completes the interview summary and test results summary on the EDP form. As a final step the evaluator makes recommendations as to where a client should be placed and notes them under the "comments" section of the EDP. The client, with the completed EDP, is then referred to a counselor.

The fourth and final step of the intake/preassessment process is the assignment of the client to a counselor. In the preassessment stage the counselor performs two important functions. Firstly, the counselor determines a client's potential barriers to employment. Potential barriers might include transportation problems, difficulties with English grammar, or child care problems. It is the counselor's job to try to find solutions to alleviate the barriers.

Secondly, the counselor finalizes the transition plan for each client. The transition plan is the end result of the EDP. The transition plan is a description of the path of training the client is to take. Final determination of this "training path" is made by the counselor, who usually follows the recommendations of the evaluator. A hypothetical example of a path of training would the following five step sequence: (1) English as a second language (2) Basic Education (3) GED (4) Classroom training (5) Work experience. The transition plan is a formal document which is to be signed by both the counselor and the client. Specific objectives are developed along with a description of activities planned to meet these objectives. The

objectives and activities are reviewed every two months by the counselor and the client. Both signatures are required on the document after review.

In most cases preassessment activities cease with the completion of the transition plan. The only exceptions are with those programs where the subcontractor gives an admissions test. Such tests are administered in connection with the computer programs, the nursing program, the cosmetology program, the drafting program, and the GW machine repair program. If a client does not pass the entrance exam he/she is sent back to preassessment for placement into another program.

The time span between testing and placement into a program varies considerably. If a program slot is open, the testing--EDP phase can be as short as one week. If a program slot is not open, the client may have to wait up to six months before placement. If a client cannot wait for a slot to open in the recommended program, alternative placement into a related program is often possible.

ONGOING ASSESSMENT

Once the client is placed into a training sequence the ongoing assessment is shared by the counselor and the subcontractor. Although, all client counseling is handled by the prime sponsor, the client remains with the counselor, who developed tne transition plan, all the way through the training sequence. Thus, a close counselor-client relationship exists through the program.

Evaluation in terms of course content and client skill acquisition is handled by the course instructors. The NVMC requires no special assessment forms to be filled out by the instructors, nor does there

appear to be any requirement that formal written assessment be done. Thus, the method of participant assessment in a particular program is done by the discretion of the course instructor. The extent of ongoing assessment done by the prime sponsors (counselor) is as follows:

1. Individual counseling is available and provided as needed. The client need only to call his/her counselor to set up an appointment.
2. The counselors meet with the clients as a group on a weekly basis. Applicant attitudes towards the program and problems with the program can be discussed at this time.
3. An employability meeting is held every five weeks. This is a meeting between each client, the instructor, the counselor, and sometimes the job developer. Usually, the job developer joins the employability meeting towards the end of the client's program.
4. EDP review every two months.

The employability meetings appear to be the mainstay of ongoing assessment. It is the employability meeting where each client is assessed in terms of the final success criterion--employment readiness. At this point, the instructor must present to the client and the counselor an assessment of the participant's progress and ability. Again, no formal and standardized documents are used for assessment.

A visit to NVMC primary subcontractor, Fort Belvoir Skills Center, resulted in the following findings concerning ongoing assessment:

1. Most instructors utilize some type of formal assessment. The type of assessment varies by program. One instructor interviewed used a progress chart, so each participant could follow their progress in the course.
2. Any ongoing assessment results used by the instructors is not given to the prime sponsors. If the results are shared, it is with the client and the counselor at the employability meeting.
3. Most of the training programs are small. Each client receives very personalized training and spends six to eight hours a day in the course. Therefore, even without formal assessment procedures, an instructor knows the capabilities of each client well.

Assessment and evaluation responsibilities of training program participants is not shared with other agencies. NVMC assumes the responsibility and cost of all evaluation activities.

POST ASSESSMENT

NVMC reported no formal means of post assessment. There was the indication that the client/counselor relationship was close, and clients often would call or visit and indicated progress after training.

PENINSULA OFFICE OF MANPOWER PROGRAMS

OVERVIEW

The Peninsula Office of Manpower Programs (POMP) coordinates CETA programs through approximately nine major contracting agencies. In this capacity the prime sponsor has placed foremost emphasis on planning and control. That is, they have defined their role primarily in terms of coordination. Specific program design, exemplified by the assessment activities, has resided with the subcontractors.

In the past year, however, the agency has modified its traditional role and decided to assume leadership in the assessment areas. As part of a demonstration project designed for their youth programs, POMP has developed a plan for an area wide asssessment center. As currently formulated, the plan calls for the assemblance of a full time staff of assessment professionals charged with responsibility to institute and evaluate the utility of a variety of assessment tools. Enthusiasm for this project is wide spread and current expectations call for start-up in the 1981 fiscal year.

INTAKE AND PREASSESSMENT

The key role in the intake process for the POMP consortium is played by the local offices of the Virginia Employment Commission (VEC). Operating five strategically located centers throughout the service area the VEC not only has responsibility for intake, but also for assessment and follow up.

As the agency responsible for intake, the VEC has two unique advantages. First, because it is the most logical place for unemployed

individuals to seek assistance, they are able to assist clients that may not be aware of CETA opportunities. The second advantage flows from the first. Because they maintain a listing of current job openings they are able to place job ready clients into unsubsidized employment immediately.

For the POMP system, the intake counselor at the VEC plays a pivotal role. It is at this point that the ultimate decision on program participation is made. Beyond the task of making an elibibility determination the VEC counselor directs the clients to a variety of training programs. Which program is entered depends upon three factors: (1) the expressed wishes of the client; (2) the availability of programs in clients' political service area and (3) the ability of the client to complete the proposed program.

In determining the appropriate program the desires of the client provides the impetus for action. If the individual sets a course of action which requires basic educational skills, a standardized test may be given by the VEC to evaluate these skills. The General Aptitude Test Battery (GATB) is the most frequently used instrument.

Once the preliminary hurdles have been cleared the client is given the opportunity to visit the proposed training site. During these orientations, the client is exposed to both the program in which the greatest interest was expressed and the range of other programs available. Subsequent to this orientation the participant returns to the VEC for further counseling and eventual placement.

The Employability Development Plan (EDP) is completed by both the VEC counselor and the counselor from the training program. At the end

of training the individual returns to the VEC for job placement.

The process as described is the basic design for essentially all subcontractors. The one exception is the Office of Human Affairs. Here they maintain a Career Development Institute (CDI). Previously the institute employed portions of the Comprehensive Occupational Assessment and Training System (COATS) to aid in its preassessment. But that portion of the project has been phased out in anticipation of the regional assessment center. The CDI is presently a one week long program that orients the individual to the world of work. Proper work conduct, employment expectations, and resume preparation are typical subject areas.

ONGOING ASSESSMENT

Once the participant has been placed in a training program, assessment is primarily the responsibility of the instructor. The client maintains continuous contact with the VEC and with various major subcontractors, but these are primarily feedback rather than assessment activities.

Another feedback opportunity is afforded to the client through the Program Review and Assessment Division of POMP. Acting as the internal monitoring unit this department contacts a representative sample of clients to determine continued eligibility and evaluate the performance of the various subcontractors. POMP's work in the area of ongoing assessment emphasizes subcontractor rather than participant assessment.

POST ASSESSMENT

As with ongoing assessment, post assessment remains the responsibility of the training institution. They are solely responsible for evaluating the client in terms of program success. In many cases the final evaluation does not follow the traditional pass-fail mode. For example, suppose a participant enters training for a machinist. It is possible at the end of the training period that the client may not be qualified as an expert machinist. Rather he/she may be capable of performing a closely related, but lower skilled job. Working with the training institution, the VEC job developer attempts to place individuals in jobs appropriate to their post training skill levels.

Besides working with the training institution on placement, the VEC assumes full responsibility for participant follow-up. At 30, 90, and 120 day intervals the VEC contacts either the client or the employer to determine current job status. Neither the prime sponsor nor the various subcontractors have formal responsibilities in this area.

PRINCE WILLIAM COUNTY

OVERVIEW

Prince Willima Manpower Consortium is located in Manassas, Virginia, a suburb of Washington, D.C. The Consortium provides services to a predominantly rural environment. Prince William is currently in the process of developing a comprehensive assessment program to evaluate its interaction with its training institutions, e.g., Northern Virginia Community College, the City of Manassas School Board, etc. Northern Virginia Community College does the predominance of training for the Consortium.

Until the time they finalize a comprehensive assessment program the Consortium relies on manpower counselors, manpower specialists, and job evaluators to aid their clients through the CETA process. Whenever a client comes to the Consortium office he is first interviewed by a manpower counselor, who helps the client determine what direction he will take. The client is then sent to a manpower specialist who will set up a training program for the client, as well as track the client through the Consortium's CETA process. When the client is nearing the completion of the training process the manpower specialist will request a job evaluation. These two people will work with the client in helping him make the transition between the training environment to a new job. It is the job evaluator's duty to locate and place a client.

INTAKE AND PREASSESSMENT

Intake and determination of CETA eligibility is subcontracted by Prince William County to the Virginia Employment Commission (VEC).

Information is gathered by the intake interviewer and recorded on an intake form. Clients determined CETA eligible are scheduled for an interview with either a manpower counselor or manpower specialist.

Prince William County relies heavily upon the pre-placement interview with either a manpower counselor or manpower specialist for program placement. In a majority of cases, placement is determined by the client's background and the client's indicated program preference. If the client does not know what program he/she desires, the General Aptitude Test Battery (GATB) may be administered to give the client and the counselor more information to assist in the selection of the appropriate program. Based upon the information gathered from the pre-placement interview, and the GATB if administered, the manpower counselor completes the client's Employability Development Plan (EDP). Placement into a training sequence occurs following completion of the EDP.

ONGOING ASSESSMENT

Ongoing assessment of the training participants is conducted by the prime sponsor's manpower specialists and by the program instructors. During the course of the training there is close contact between the manpower specialists and their clients.

Reports on each client's progress are obtained by Prince William County's manpower specialists when they meet with the training program instructors. Generally, the assessment information is limited to whether or not the client is making satisfactory progress in the program. No formal written evaluations of the client's progress are required by the prime sponsor. Meetings between the

manpower specialists and the program instructors are held on a regular basis, with the exact time interval between meetings varying from program to program.

During the course of training there are also periodic meetings between the manpower specialist and the client. Again, the time interval between meetings varies from program to program. It is during these meetings that the client has the opportunity to provide feedback concerning any aspect of the training to the manpower specialist.

Towards the end of the client's training sequence, the manpower specialist makes an assessment concerning the participant's employability. If the client requires no further training and is determined job ready, the manpower specialist works with the client towards job placement.

POST ASSESSMENT

Three months after the successful completion of training, a questionnaire is sent to the client requesting the following information: (1) the client's employment status; (2) the client's current wage level; and (3) the client's job title and duties. A self-addressed envelope is attached to the questionnaire in order to facilitate return. The questionnaire does not ask the client to rate or make comments about the training received.

RICHMOND AREA MANPOWER PLANNING SYSTEM

OVERVIEW

The Richmond Area Manpower Planning System (RAMPS) is currently reviewing its assessment and evaluation procedures. While future plans are still in the formulation stage, their preliminary outlines have been drawn. RAMPS has enlisted the services of a full-time Educational Diagnostician to develop, implement, and monitor a comprehensive assessment system.

In addition, the community should soon benefit from the work of their local Private Industry Council (PIC). Funded under Title VII of the Comprehensive Employment and Training Act, the Richmond PIC is in the process of developing an exhaustive assessment demonstration project. Integrating a wide variety of community resources, the Council hopes to develop and evaluate a model assessment system.

If current plans reach fruition, the Richmond PIC Project should be of interest to prime sponsors throughout the State. It represents a pioneering effort aimed at designing and evaluating an assessment system developed to meet the specific needs of CETA program participants.

The current movement at RAMPS to streamline and upgrade its assessment activities is not being undertaken in the absence of a working system. While administratively complex, the assessment and evaluation function is being performed through various subcontractors.

INTAKE AND PREASSESSMENT

Potential participants residing in the RAMPS service area may initiate contact with the program through any one of a number of

Neighborhood Service Centers. Operated by a major subcontractor, the Richmond Community Action Program (RCAP), the service centers route participants to one of the four strategically located centers employing a CETA intake counselor.

From the intake center the clients are generally directed to one of the two principal subcontractors for the metropolitan system, the RCAP Education and Training Center or the Opportunities Industrialization Center (OIC). The criteria for sending the participant to a program are guided by: the expressed desire of the client, the number of openings in a particular program, and the intake counselor's judgement regarding the most suitable placement. Other subcontractors are also available depending upon specific client needs and some participants are referred directly to the Virginia Employment Commission (VEC) for placement in public service jobs.

Because of RAMPS unique geographical situation--two service areas are not contiguous with the metropolitan area--the more distant participants are serviced by either the Charles City/New Kent Community Action Agency or the Powhatan/Goochland Community Action Agency. Both provide services similar to the RCAP and OIC Programs.

Metropolitan participants, once they have been routed to RCAP or OIC, are received by an assessemnt counselor. At this point the participant is simultaneously appraised of the variety of options available through CETA funded programs and assisted by the counselor in the completion of an Evaluation Profile Form (EPF). Essentially a biographical and participant interest profile, this form provides a departure point for future program assignment.

Upon completion of the EDF, the client may proceed down one of two paths. The individual is either recommended for a specific training program or for further assessment and evaluation. Participants entering a training program may be required to pass entrance exams specific for that program. These vary in rigor from standardized professionally developed instruments to simple in-house general screening devices.

If the individual does not move directly into a program, further preassessment takes place. Clients hindered simply by an inability to select from the various options may be exposed to an interest cluster survey, designed to identify their interest areas and expose them to potential career paths. Others may have educational weaknesses and therefore be advised to take standardized aptitude or achievement tests. Typical instruments are: Test of Adults Basic Education (TABE) and General Aptitude Test Battery (GATB).

Having completed the interview and assessment phase of the process, participants again meet with the assessment counselors in order to complete the required Employability Development Plan (EDP). This plan makes explicit the programmed action leading to eventual job readiness. While not as formal as a contract, it nonetheless establishes a formal commitment and allows for full involvement by the client.

After completion of the EDP, the RAMPS Program is somewhat unique from those of other prime sponsors. The participants proposed EDP is now subjected to review by an Assessment Team. The team consists of: the RAMPS educational diagnostician, a representative of the training agency, and a representative of the Virginia Employment Commission (VEC).

This committee reviews the EDP and makes a final decision as to its acceptability. The assessment counselor may be present, acting as client advocate. Individual participants do not play a role in these deliberations.

Without final approval by the assessemnt team the participant is not allowed to enter a program. In the event the committee reaches a decision unacceptable to the participant, there is a review and appeals mechanism available.

Once the committee has approved the EDP developed and signed by the assessemnt counselor and client, the actual training is free to begin. This does not mean that the next step is immediate job readiness. Participants may have EDP's with provisions calling for improvement in basic educational skills. Training readiness as opposed to job readiness is the objective of these basic educational programs.

ONGOING ASSESSMENT

As with most other prime sponsors, ongoing assessment is primarily the responsibility of the training institution. Depending upon the program and the contractor, ongoing assessment may be quite extensive or very minimal. In the RAMPS case a dual ongoing assessment system is in operation at both RCAP and OIC.

Ongoing assessment is dual in the sense that the training instructor and a counselor have shared roles. Assessment with respect to specific performance in a program is left exclusively up to the instructor. Analogous to the typical teacher having full responsibility for student evaluation.

The counselor's role in the process take two forms: group and individual meetings between the counselor and the client. Group meetings attempt to teach and provide feedback on a variety of social skills necessary to retain successful employement. Individual counseling allows more critical feedback between the client and counselor. In those programs were clients are trained away from the larger contractors, disposition meetings are held regularly. In this manner, the smaller training sites are integrated into the larger system.

Ongoing assessment is difficult to generalize about due to the large number of training regimes available. While participants are to receive counseling throughout the course of their training this does not appear to be a high priority requirement. Ongoing assessment in most cases appears to be the simple success-fail model common to classroom instruction.

POST ASSESSMENT

In the majority of cases post assessment is essentially equivalent to the traditional final exam. Instructors typically have primary responsibility for administration of these instruments.

An exception to the rule is found at the OIC. Here the participants return to the assessment counselors for final examination. Using tests designed specifically for their own programs, the counselors evaluate the participants. Successful completion indicates that the client is ready for job placement by the VEC job developer.

Long term follow-up is not a program activity. Once a client has successfully completed a training program and has been referred to the VEC, contact is essentially terminated.

ROANOKE--FIFTH DISTRICT EMPLOYMENT AND TRAINING CENTER

OVERVIEW

The Fifth District Employment and Training Consortium (FDETC) has recently adopted a reorganization plan for their Certification (Intake), Assessment and Central Records Units. With initial operation scheduled for October 1, 1980, the plan will not only realign managerial and functional relationships but will also initiate a completely new assessment system.

At present the assessment function is subcontracted to a Roanoke community services agency, Total Action Against Poverty (TAP). Dissatisfaction with this arrangement arose for a number of reasons. Principle among them were: (1) the division of intake and assessment between two agencies resulted in organization problems causing a dilution of prime sponsor control; (2) budgetary restrictions over the last several years dictated the need for increased efficiency; and (3) CETA reenactment legislation placed increased emphasis on more professional and accountable intake, assessment and participant tracking functions.

Under the previous organizational design, clients initially entered CETA programs through a central intake center operated by the prime sponsor. Once this unit determined eligibility, clients were referred to TAP for assessment and placement. Assessment at TAP played a secondary role relative to placement emphasis. Assessment instrumentation was limited to three tools: the Test of Adult Basic Education (TABE), Hall's Occupational Orientation Inventory, and the Self Directed Search

Guide. Determination as to which clients would utilize these instruments was left up to the assessment counselor. Placement decisions were made on the basis of client desires, the counselor's evaluation of client potential and the available training opportunities. Continuing assessment, post assessment, and placement in unsubsidized employment were defined primarily as subcontractor responsibilities.

INTAKE AND PREASSESSMENT

In order to correct deficiencies and improve program success the FDETC has expanded the intake services unit into a comprehensive Client Services Unit. Three functional areas will operate out of this unit: Intake, Assessment, and Central Records.

Intake will operate in a manner essentially unchanged from the current system. Clients are initially screened for eligibility by an intake aide. If the participant has available the correct set of information and meets some initial screening qualifications, he/she is referred to an intake counselor. The counselor and participant then complete a comprehensive eligibility questionnaire. Once all the necessary verifications are complete the participant is referred to the assessment unit.

The new assessment unit, replacing the previous TAP program, will be staffed by a Chief Counselor and four associate counselors. The job description for the position of Chief Counselor requires demonstrated professional training and experience. An individual having a minimum of a Masters degree or its equivalent is expected to fill the position.

All participants will be directed to the assessment unit for interviewing, testing, and counseling based upon the test results. At this time the instrumentation for assessment has not been selected, but it is expected to include both paper and pencil and work sample instruments. The total assessment sequence is not expected to exceed a one week duration.

Completion of the Employability Development Plan (EDP) will begin with the assessment process. The final plan will represent the combined inputs of the client, the assessment counselor, and the subcontractor selected as the training site.

ONGOING ASSESSMENT

Regularly scheduled ongoing assessment is not included in the current design. Counselors may meet at monthly intervals with the client and subcontractor but this will occur only in response to a demonstrated need. Group counseling is also a planned contingency but as yet no formal program is planned. The only formally mandated contact between the prime sponsor and client is that required to complete a monthly client status report. This report documents continued eligibility; it is not designed to evaluate participant performance in a specific program.

POST ASSESSMENT

Final evaluation of participants for job readiness will remain a subcontractor responsibility, with only limited participation by the prime sponsor. It is anticipated that the consortium will eventually develop a Job Factory to assist clients in finding unsubsidized

employment. Modeled after successful programs in other states, the Job Factory is a four week intensive program combining labor market education and personal selling skills development with carefully planned and closely supervised job search activities.

At present there is not a firmly established follow-up program after placement outside the training programs. However, the new system does call for follow-up at 30 and 90 day intervals.

SOUTHEASTERN TIDEWATER AREA MANPOWER AUTHORITY

OVERVIEW

The Southeastern Tidewater Area Manpower Authority (STAMA) is a large prime sponsor offering a wide variety of programs under CETA. Presently, the prime sponsor is subcontracting all client-oriented assessment activities to either the Tidewater VEC/CETA or to the Southeast Tidewater Opportunity Project (STOP). The Tidewater VEC/CETA handles all client activities in connection with intake, pre-program assessment, training program placement, counseling, job placement, and post-program assessment. Program activities handles by STOP are restricted to those clients entering individual referral programs. Clients are referred to STOP after the Tidewater VEC/CETA has completed intake and preprogram assessment services. Thus, the activities provided by STOP generally consist of a pre-program interview, counseling, and post-program assessment. Placement efforts for individual referral participants are handles by a job developer from the Tidewater VEC/CETA.

INTAKE AND PREASSESSMENT

The intake and assessment process for STAMA is contracted to the Tidewater Virginia Employment Commission (VEC). Client participation begins with t completion of a CETA application. The application is completed during an interview with the client by an intake person. The purpose of the application is to determine both eligibility and the program desired by the client. Generally, CETA eligibility is determined the same day, provided the client brings in the necessary information.

The second step involves the administration of the California Achievement Test (CAT). Generally, the test is scheduled to be administered from two days to a week after CETA eligibility has been determined. The purpose of administering the CAT is to assess an individual's school achievement level. Such information can be used in the determination of program placement. The results are also useful in determining whether or not the client has at least a sixth grade achievement level, the minimum required for valid results to be obtained from the General Aptitude Test Battery (GATB), should it be given.

After the results of the CAT are available (usually at least two weeks after asministration) an applicant is scheduled with a job counselor. Usually, it takes from one to two weeks to see a job counselor after test results are obtained. The job counselor discusses the test results with the client, discovers the client's interest and makes a determination as to whether further testing is required or if placement into a program can be initiated. If further testing is determined to be necessary, then the GATB is administered.

If the program selected is with a skills center, a pre-enrollment interview is held between the client and the instructor.

If an individual referral program is indicated, the client is sent to a counselor at the Southeast Tidewater Opportunity Project (STOP). A counselor at STOP then interviews the client to see if an individual referral program is appropriate.

When the client is elected and registered for a training slot, the employee development plan is completed by the VEC-CETA job counselors.

During the assessment process, if an individual does not know what activities or program they are interested in, the VEC does encourage the clients to individually examine and complete the Interest Inventory (II) made available by the U.S. Department of Labor. The Interest Inventory identifies the type of occupation the client should like given the responses to instrument questions. The next step is to look at the Dictionary of Occupational Titles where descriptions of the duties that certain occupations encompass are summarized. The final step involves examining the Occupational Outlook Handbook to see if there is likely to be a market for a particular occupation.

ONGOING ASSESSMENT

Contracts with subcontractors require that counseling be provided. So, rather than counseling being offered by the prime sponsor, it is provided by the subcontractor. At any stage in the program a client may make an appointment with a counselor and provide feedback concerning any problems encountered. In addition, there are VEC-CETA liaison counselors which meet regularly with the subcontractor upon request. For those persons enrolled in individual refferal programs, counseling is provided by the Southeast Tidewater Opportunity Project (STOP).

While in training a client has two active files, one being maintained by the subcontractor counselors or by the STOP counselors and one being maintained by VEC-CETA counselors. As far as can be determined, the files are not merged upon completion of training.

The VEC does require that progress reports be completed by all training program instructors and sent to VEC/CETA counselors. The format of the progress reports are not standardized by the VEC/CETA. All that is required is some written verfication of a client's performance every thirty days, so that participant progress can be recorded.

Thirty days prior to completion of training a job developer talks with the clients. The purpose is to give the clients leads to possible job openings. While a client is in a "job entry pending" status, the job developer keeps in constant contact with the client. There are some problems indicated with having the job developer absent during, the pre-program assessment stage. For example, there were clients enrolled in individual referral programs (i.e., upholstery) where there were virtually no job openings.

POST ASSESSMENT

Post assessment is limited to those clients who participated in an individual referral program. STOP contacts those clients who were terminated for placement and their employer 30, 60, and 90 days after training.

Post assessment activities concerning clients handled by the Tidewater VEC/CETA are limited.

APPENDIX D

SOURCES OF TECHNICAL GUIDANCE ON TESTING AND MEASUREMENT IN VIRGINIA

SOURCES OF TECHNICAL GUIDANCE ON TESTING AND MEASUREMENT IN VIRGINIA

The following is a list of individuals affiliated with the Virginia educational community who can provide technical guidance on diagnostic testing and measurement. They may also be able to direct interested parties to other individuals at specific colleges or universities in the State with whom prime sponsors might contract for assistance on a particular subject area within the testing and measurement field. If assistance should be sought of someone not on this list, however, the prime sponsor should first obtain that individual's curriculum vita and roster of course work in testing and measurement to assure that the individual's background and expertise are appropriate for the consulting work desired.

Alphabetically listed:

Dr. John Bernardin
Department of Psychology
Virginia Polytechnic Institute and State University
5081-A Derring Hall
Blacksburg, Virginia 24061
(703) 961-7030

Dr. Robert Frary
Learning Resources Center
Virginia Polytechnic Institute and State University
2096 Derring Hall
Blacksburg, Virginia 24061
(703) 961-5413

Dr. Charles King
Coordinator of Statistical Services
Fairfax County Public Schools
3701 Franconia Road
Alexandria, Virginia 22301
(703) 960-8936

Dr. Robert McGough
Vocational/Technical Education Department
Virginia Polytechnic Institute and State University
313 Lane Hall
Blacksburg, Virginia 24061
(703) 961-5805

Dr. Claude A Sandy
Testing Service
Division of Research, Evaluation and Testing
State Department of Education
Richmond, Virginia 23216
(804) 786-1281

In addition, on each prime sponsor's advisory committee, there is a representative of the local community college. That representative should be able to identify local expertise if such exist. However, based on inquiries of all colleges and universities in the state, it is clear that such expertise is not widespread in the state.

APPENDIX E

SELECTIVE LIST OF TEST PUBLISHERS

APPENDIX E

Selective List of Test Publishers[1]

American College Testing Program, P.O. Box 168, Iowa City, Iowa, 52240

American Guidance Service, Inc., 720 Washington Avenue, S.E., Minneapolis, Minnesota, 55414

Australian Council for Educational Research, Frederick St., Hawthorn E.2 Victoria, Australia

The Bobbs-Merrill Company, Inc., 4300 East 62nd Street, Indianapolis, Indiana, 46206

Bureau of Educational Measurements, Kansas State Teachers College, Emporia, Kansas, 66801

Bureau of Educational Research and Service, University of Iowa, Iowa City, Iowa, 52240

California Test Bureau, Del Monte Research Park, Monterey, California, 93940

Center of Psychological Service, 1835 Eye Street, N.W., Washington, D.C., 20006

Committee on Diagnostic Reading Tests, Inc., Mountain Home, North Carolina, 28758

Consulting Psychologists Press, Inc., 577 College Avenue, Palo Alto, California, 94306

Cooperative Test Division, Educational Testing Service, Princton, New Jersey, 08540

Educational and Industrial Testing Service, P.O. Box 7234, San Diego, California, 92107

Educational Test Bureau, Division of American Guidance Service, Inc., 720 Washington Avenue, S.E., Minneapolis, Minnesota, 55414

Guidance Centre, Ontario College of Education, University of Toronto, 371 Bloor Street, W., Toronto 5, Ontario, Canada

Harcourt, Brace & World, Inc., 757 Third Avenue, New York, New York, 10017

Hayes Educational Test Laboratory, 7040 North Portsmouth Avenue, Portland, Oregon, 97203

Houghton Mifflin Company, 2 Park Street, Boston, Massachusetts, 02107

Institute for Personality and Ability Testing, 1602 Coronado Drive, Champaign, Illinois, 61822

Lyons and Carnahan, 407 East 25th Street, Chicago, Illinois, 60616

National Foundation for Educational Research in England and Wales, the Mere, Upton Park, Slough, Bucks, England

Ohio Scholarship Tests, State Department of Education, 751 Northwest Boulevard, Columbus, Ohio, 43212

Personell Press, Inc., 20 Nassau Street, Princeton, New Jersey, 08540

The Psychological Corporation, 304 East 45th Street, New York, New York, 10017

Psychometric Affiliates, 1743 Monterey, Chicago, Illinois, 60643

Public Personnel Association, 1313 East 60th Street, Chicago, Illinois, 60637

Public School Publishing Company, 4300 East 62nd Street, Indianapolis, Indiana, 46206

Scholastic Testing Service, Inc., 480 Meyer Road, Bensenville, Illinois, 60106

Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois, 60611

Scott, Foresman and Company, 433 East Erie Street, Chicago, Illinois, 60611

Sheridan Supply Co., P.O. Box 837, Beverly Hills, California, 90213

Stanford University Press, Stanford, California, 94305

C. H. Stoelting Co., 424 North Homan Avenue, Chicago, Illinois, 60624

Teachers College Press, Teachers College, Columbia University, New York, New York, 10027

United States Government Printing Office, Washington D.C., 20402

University of London Press, Ltd., Little Paul's House, Warwick Square, London E.C.4, England

Western Psychological Services, Box 775, Beverly Hills, California, 90213

[1]Published as an Appendix in Mehrens, W.A. and Lehmann, I.J., Standardized Tests in Education, New York: Holt Rinehart, and Winston, 1968.

APPENDIX F

INDIVIDUAL TEST REVIEWS

INSTRUMENTS USED IN VOCATIONAL EVALUATION FACILITIES

Achievement Tests

1. Adult Basic Learning Examination (ABLE)
2. Basic Occupational Literacy Test (BOLT)
3. California Achievement Test (CAT)
4. Iowa Test of Educational Development (ITED)
5. Metropolitan Achievement Tests (MAT)
6. Peabody Individual Achievement Test (PIAT)
7. Sequential Tests of Educational Progress (STEP)
8. Stanford Achievement Tests (SAT)

Aptitude Tests

1. Differential Aptitude Test (DAT)
2. General Aptitude Test Battery (GATB)
3. Multiple Aptitude Tests (MAT)
4. Nonreading Aptitude Test Battery (NATB)

Interest Inventories

1. Harrington/O'Shea System for Career Decision-Making (CDM)
2. Kuder General Interest Survey (GIS)
3. Kuder Occupational Interest Survey (OIS)
4. Minnesota Vocational Interest Inventory (MVII)
5. Picture Interest Inventory (PII)
6. Strong Vocational Interest Blank (SVIB)
7. Wide Range Interest and Opinion Test (WRIOT)

Personality Inventories

1. California Psychological Inventory (CPI)
2. Edwards Personal Preference Schedule (EPPS)
3. Minnesota Multiphasic Personality Inventory (MMPI)

Work Sample Systems

1. Comprehensive Occupational Assessment and Training System (COATS)
2. Micro-TOWER System
3. Philadelphia Jewish Employment and Vocational Service (JEVS)
4. Singer Vocational Evaluation System
5. TOWER Evaluation System
6. Valpar Component Work Sample Series

1. Title of test: USES Basic Occupational Literacy (BOLT)

2. Authors: United States Employment Service

3. Publisher: United States Government Printing Office

4. Population for which designed: Educationally disadvantaged adults.

5. Purpose: The BOLT is a "test of basic reading and arithmetic skills intended for use with disadvantaged adults." Since the subtest scores can be converted into the GED levels, it is possible to relate the test to occupational requirements in reading and arithmetic which are expressed in GED levels. However, the tests are designed to span the range of minimal literacy to the high school dropout level. The test developers opted for shorter administration time to meet the realities of testing advantaged examinees.

6. Administration: The Wide-Range Scale is administered as a screening device to determine the appropriate levels for each test taker. Each subtest has 2-3 forms and 3-4 levels (Fundamental, Basic Intermediate, High Intermediate, and Advanced). All subtests are relatively short (12-20 items) and take a short time to administer (15-25 minutes for Reading Vocabulary and Reading Comprehension subtests, and 30-40 minutes for Arithmetic Computation and Arithmetic Reasoning). Separate answer sheets must be used.

7. Content: The BOLT consists of five subtests: (a) Wide-Range Scale screening test to determine appropriate level of BOLT to administer; (b) Reading Vocabulary; (c) Reading Comprehension; (d) Arithmetic Computation; and (e) Arithmetic Reasoning.

8. Scoring: Scoring can be done by hand or machine. Each subtest raw score is converted to a standard score, and this is in turn translated to a GED level. It is then possible to relate the test to occupational requirements in reading and arithmetic which are expressed in GED levels.

9. Norm groups: The normative data presented in the manual is of little value. Technical data was obtained on a group that included applicants for work, students in adult classes, and prison inmates. This group had an average of nine years of schooling and approximately 60 percent were unemployed.

10. Reliability: K-R 20 coefficients reported for simulated raw scores range from .61 to .82, with a median .76. These depressed reliabilities are due in part to the shortness of the test.

11. Validity: The validity for predicting occupational success has yet to be determined.

12. Strengths and weaknesses: The BOLT is an appropriate test for measuring literacy among disadvantaged adults. It is based on the practical content orientation of its items to occupational and life tasks. It is simplistic in design and practical for use with people who have little tolerance for test taking. However, the technical information now provided is seriously insufficient. The BOLT definitely needs additional empirical support.

1. Title of test: California Achievement Tests (CAT)

2. Authors: Ernest W. Tiego and Willis W. Clark

3. Publisher: CTB/McGraw-Hill, 1970

4. Population for which designed: Grades 1.5-2, 2-4, 4-6, 6-9, 9-12; five different levels.

5. Purpose: The tests are "designed for measuring, evaluating, and analyzing school achievement in terms of student performance in the basic curricular content areas of reading, mathematics, and language."

6. Administration: The CAT are available in two forms for five grade levels (1.5-2, 2-4, 4-6, 6-9, 9-12). The CAT are administered in three sessions with the total time for administration differing for each level (114-171 minutes for level 1; 123-177 minutes for level 2; 152-212 minutes for level 3; 144-198 minutes for level 4; and 153-207 minutes for level 5). Separate answer sheets are available. Subtests in reading, mathematics and language are available as separate tests.

7. Content: The CAT provide measures on reading (vocabulary, comprehension, total), mathematics (computation, concepts and problems, total), language (auding [grades 1.5-2 only], mechanics, usage and structure, total, spelling) and a total score.

8. Scoring: The CAT may be hand scored or machine scored. The Achievement Development Scale Scores (ADSS) and the Anticipated Achievement Scale Scores (AASS) are provided along with percentiles, stanines, grade equivalents, T scores and Z scores.

9. Norm groups: The standardization sample included over 200,000 students from public and Catholic schools in 36 states. The public school population was stratified according to geographic region, average enrollment per grade, and community type; and the Catholic schools, according to geographic region, enrollment and type of school (diocesan or private).

10. Reliability: Alternate-form reliabilities are reported for the total battery score, the three tests, the subtests, and spelling. Coefficients for the total battery range from .86 to .96 with a median of .93. Reliabilities for the three tests range from .80 to .91 with median reliabilities of .87 for language and reading and .855 for mathematics. Individual subtests reliabilities are generally in the .70's and .80's.

11. Validity: Statistical validity is inferred from appropriate placement of items in the various levels and form the subtest intercorrelations. CAT are developed to attain national consensus content validity. Local content validity must be judged locally.

12. Major strengths and weaknesses: It is a well-developed traditional achievement series, recommended for consideration in schools that plan to confine their systematic standardized testing to the three R's and plan to test across a number of grades. Potential users should be cautious about overinterpreting results in the very early grades and against overuse of individual pupil item analysis.

1. Title of test: Iowa Tests of Educational Development (ITED)

2. Authors: E.F. Lindquist and Leonard S. Feldt

3. Publisher: Science Research Associates, Inc.

4. Population for which designed: grades 9 - 12

5. Purpose: The ITED were prepared to "provide a comprehensive and dependable description of the general educational background of the high school student."

6. Administration: There are two editions being used. The MRC form can be rented only. Total time required is about 464 - 540 minutes. The IBM form needs 60 - 70 minutes for most tests.

7. Content: There are nine tests which are employed drawing on the subject matter of four broad curricular areas: social studies, natural sciences, general mathematics, and English.

8. Scoring: The ITED has 2 different kinds of scoring procedures. The SRA-scored procedure and school-scored procedure. There are raw scores, standard scores and percentiles for the nine tests of Form X-4 available.

9. Norm groups: The norms were established by stratifying from 136 school systems of 36 states, contributing 51,098 students. A number of different kinds of norms are available.

10. Reliability: Within-grade split-half reliabilities for all tests are reported, ranging in the .80's and .90's with reliabilities for the composite reaching a striking .98 or .99.

11. Validity: The correlations between ITED composite scores and later school and college success are ranging from .40's to the .70's or higher.

12. Strengths and weaknesses: The ITED battery is one of the most widely used measures of achievement ever designed and is one of a number of nearly perfect instruments and its quality as well as its popularity justify a scrutiny of certain testing practices of which it is an outstanding exemplar. The most serious deficiency of the ITED program is the failure to provide the kind of statistical data. Also, there is no single manual to which one may refer for basic information.

1. Title of test: Metropolitan Achievement Tests (MAT)

2. Authors: Walter N. Durost, William H. Evans, James D. Leake, Howard A. Bowman, Clarke Cosgrove, and John G. Read.

3. Publisher: Harcourt, Brace Jovanovich, Inc.

4. Population for which designed: Grades 9-13.

5. Purpose: The test is focused on a very simplistic one-to-one comparison between performance on an intelligence test and on the achievement test. Therefore, a student's achievement in various areas as expressed in stanine terms is an accurate portrayal of relative strength and weakness. Also, the MAT can be reviewed as an ability of an item to distinguish between students at successive grade levels.

6. Administration: The MAT is available in two forms for six grade levels (Kgn-1.4, 1.5-2.4, 2.5-3.4, 3.5-4.9, 5.0-6.9, and 7.0-9.5). The number of sessions and total time required to administer the MAT differs according to the level. For the intermediate and advanced levels total administration time ranges from 265-320 minutes and is administered in six sessions. Separate answer sheets are available. Scoring stencils are provided if the test is to be hand scored.

7. Content: The battery consists of 11 subtests: (1) reading; (2) spelling, (3) language arts, (4) language study skills, (5) social studies study skills, (6) social studies vocabulary, (7) social studies information, (8) mathematical computation and concepts, (9) mathematical analysis and problem solving, (10) scientific concepts and understanding, and (11) science information. The language, mathematics, science and social studies subtests are available as separate tests.

8. Scoring: The MAT can be hand scored or machine scored. Raw scores can be converted to standard scores, percentile, ranks, stanines, and grade equivalents.

9. Norm groups: Percentile and stanine norms are provided for age-controlled samples at each grade level and for college preparatory groups at each grade level. Both fall and spring norms were empirically derived.

10. Reliability: Internal consistency estimates range from .84 to .97 with the median reliability above .90. Standard errors of measurement are generally low. No information about the stability of the test over time is reported.

11. Validity: The validity of the MAT appears to be satisfactory with respect to content, but information relative to predictive or concurrent validity is lacking in the general manual.

12. Strengths and weaknesses: The MAT was carefully developed and standardized. It adequately measures the traditional curricular emphasis on basic skills and knowledge found in many elementary and intermediate schools. Excellent accessory materials are provided for evaluating the technical qualities of the battery and for obtaining suggestions for the use of the test results. Some items may not reflect curricular materials being presented today.

1. Title of test: Peabody Individual Achievement Test (PIAT)

2. Authors: Lloyd M. Dunn and Frederick C. Markwardt, Jr.

3. Publisher: American Guidance Service, Inc.

4. Population for which designed: Kindergarten to grade 12.

5. Purpose: The purpose of the PIAT is to provide a wide range screening measure of achievement in the areas of mathematics, reading, spelling, and general information.

6. Administration: The time for this test is about 30 - 40 minutes. A para-professional might be taught to use it. No formal training is required to administer this test.

7. Content: The PIAT contains mathematics, reading recognition, reading comprehension, spelling, general information total. The material includes 2 volumes of test plates on rings. The covers can be assembled to form a display stand.

8. Scoring: The five subscores and the total score may be converted into a variety of forms: grade scores, percentile ranks W/I grades, age scores, percentile ranks W/I grades, and normalized standard scores.

9. Norm groups: The standardization sample was drawn from nine regions of the United States. It should allow users to make comparison with "typical" persons.

10. Reliability: Test-retest reliabilities for the total tests are .92, median .89. The reading recognition subtest has as high reliability as the total test.

11. Validity: The correlations between PIAT total scores and PPVT IQ's range from .53 to .79 with median .68.

12. Strengths and weaknesses: The PIAT is a power test which can be administered by a well-trained para-professional. The test will be well conceived as a screening device to help educational diagnosticians obtain a quick, rough estimation of educational levels.

1. Title of test: Sequential Tests of Educational Progress (STEP)

2. Author: Cooperative Test Division.

3. Publisher: Educational Testing Service

4. Population for which designed: Grades 4-6, 7-9, 10-12, and 13-14

5. Purpose: The STEP was designed to measure certain central skills and understanding which might have been a result of a number of courses. Unlike conventional achievement tests, the tests "would emphasize broad understandings and abilities to utilize learned skills in solving new problems rather than abilities to handle only the facts of 'lesson material.'"

6. Administration: There are 6 areas: (1) reading, (2) writing, (3) science, (4) mathematics, (5) listening, and (6) social studies. Two forms (A and B) were designed for each of the 4 levels (1, 2, 3, and 4). The essay test requires 35-40 minutes for administration. The listening test requires 90-100 minutes for administration. All other tests require 70 minutes.

7. Content: Reading, writing, math, science, social studies, listening, and essay are included in this test and 3 different testing forms are used: essay test, listening test, and other test.

8. Scoring: Hand scoring and machine scoring can be used. The essay tests have no objective keys but are scored by comparison with model essays in the Handbook.

9. Norm groups: The norms are based on an "availability" sample and no data are provided to tell the test user what sort of biases have resulted by giving the tests only in those schools in the selected sample that were willing to give them.

10. Reliability: Reliability estimates were obtained only from internal analysis based on single administrations of Form A tests. No reliability coefficients were provided for Form B tests.

11. Validity: No statistical evidence of validity was presented except correlations with SCAT scores which were very high.

12. Strengths and weaknesses: The STEP is indeed an important battery for assessing the general aspects of educational development. The main shortcoming is the failure to carry forward the job of documentation.

1. Title of test: Stanford Achievement Test: High School Basic Battery (SAT)

2. Authors: Gardner, Merwin, Callis, and Madden

3. Publisher: Harcourt, Brace Jovanovich, Inc.

4. Population for which designed: Grades 9-12.

5. Purpose: The test was first published in 1955 to help the educator to understand the student's comprehension of concepts and principles. Its purpose is to test high school students grade equivalency in math, reading, science and spelling.

6. Administration: This test has a large sample base with 7 subtests. The total time needed to administer the battery is about 320-350 minutes.

7. Content: The High School Basic Battery consists of 7 subtests: (1) english, (2) numerical competence, (3) mathematics, (4) reading, (5) science, (6) social studies, and (7) spelling. Supplementary tests in arts and humanities, business and economics, and technical comprehension are also available.

8. Scoring: Machine scoring service are provided by MRC and IBM. The raw scores are transformed to percentiles and stanines.

9. Norm groups: The norming sample was large (22,699 students in 58 schools). Separate norms have been prepared at each grade level for students taking college preparatory subjects.

10. Reliability: Four estimates are given of the reliability of each test at each grade level. All estimates are obtained by internal consistency method. Of the 108 reliability coefficients only one coefficient is below .85 and 75 coefficients are .90 or above. Coefficients for grade 9 tend to be slightly lower.

11. Validity: This test has a lack of validity data.

12. Strengths and weaknesses: The greatest deficiency of the battery is the way in which some of the information is presented in the manual. This will cause some inconveniences to the user. However, the SAT High School Basic Battery does provide an excellent sample of school achievement items taken from a clearly defined content universe.

1. Title of test: Differential Aptitude Test (DAT)

2. Authors: George K. Bennett, Harold G. Seashore, and Alexander G. Wesman

3. Publisher: The Psychological Corporation, 1963.

4. Population for which designed: Grades 8-12

5. Purpose: The DAT was designed to measure the "abilities of boys and girls in grades 8 through 12 for the purpose of educational and vocational guidance."

6. Administration: There are two forms (L and M). This group pencil-and-paper is administered in two separate booklets. Each booklet takes approximately 90 to 120 minutes to administer. Although all tests are timed only the clerical speed and accuracy test is speeded. Alternative testing schedules allow for the test to be completed in two, four, or six sessions. Separate answer sheets are used.

7. Content: Each form is composed of eight subtests: verbal reasoning, numerical ability, abstract reasoning, clerical speed and accuracy, mechanical reasoning, space relations, spelling and grammar. All sub-tests are multiple choice items. Abstract reasoning and space relations use geometric forms while mechanical reasoning pictorially presents mechanical situations.

8. Scoring: The DAT may be hand scored or machine scored. Percentile ranks and stanines can be obtained for the eight sub-tests and for combined raw scores on verbal reasoning and numerical ability. The scores are plotted on a reporting form for easy interpretation.

9. Norm groups: The norm group includes more than 50,000 students in grades 8 through 12 in 43 states. Norms are developed for each sex and for each grade level. The normative sample testing was done in the fall.

10. Reliability: Split-half reliability coefficients were computed separately for each sex and each grade for all sub-tests except the clerical speed and accuracy sub-test. Mean reliability coefficients for the separate sub-tests range from .87 to .94 for boys and from .79 to .95 for girls.

11. Validity: The DAT has been successfully validated against course grades, achievement test and vocational and educational success. It is one of the most thoroughly researched batteries in existence.

12. Strengths and weaknesses: The DAT is a well constructed and thoroughly researched instrument which can provide information relevant to decisions concerning future educational plans. The printing and pictures are all very clear and legible and the manual is complete and relatively easy to read. Because of the reading skills required and the abstract nature of some of the sub-tests, this test may present problems for individuals with little formal education.

1. Title of test: General Aptitude Test Battery (GATB) B-1002

2. Author: United States Employment Service

3. Publisher: United States Government Printing Office, 1946-1963

4. Population for which designed: Ages 16 and over, grades 9-12 and adults.

5. Purpose: The GATB was designed to assess "vocationally significant aptitudes" useful in vocational counseling, job selection, and job placement.

6. Administration: The total time required to administer this group test is approximately 135 minutes. Eight of the tests are printed in three booklets and four sub-tests are performance tests utilizing a peg board and a finger dexterity board. Sturdy tables are required for the performance tests. For this edition, separate answer sheets are required.

7. Content: The GATB is composed of 12 sub-tests, 8 of which are pencil-and-paper tests. Item type and format are diversified including name matching, form matching, identification of synonyms or antonyms, numerical computation, and perception of two and three dimensional objects. The four performance tests utilize a 48 hole pegboard and a 50 hole rivet board.

8. Scoring: The GATB may be scored by hand or machine. Raw scores are converted and combined to obtain nine aptitude scores: (1) general learning ability, (2) verbal aptitude, (3) numerical ability, (4) spatial aptitude, (5) form perception, (6) clerical perception, (7) motor coordination, (8) manual dexterity, and (9) finger dexterity. These aptitude scores are presented in standard scores whith a mean of 100 and a standard deviation of 20 and are compared to requirements or specific job areas.

9. Norm groups: Normative data was collected on 4,000 workers in 1952 who represented the "general working population" with respect to age, sex, education, occupation and geographical distribution.

10. Reliability: Most of the reliability data is presented in the form of coefficients of stability, ie. test-retest coefficients for all aptitude scores as opposed to individual test scores. Nearly all of these coefficients are in the range of .80 to .90.

11. Validity: The GATB is probably the best validated test of this type. Extensive validity data are reported for numerous specific occupations or clusters of highly similar occupations using tetracloric r's and pearson r's. Tetracloric correlations range from .24 to .96 with a median of about .65. The median of the coefficients listed as predictive validations based on longitudinal designs is .71.

12. Strengths and weaknesses: The GATB is a widely used and technically superior battery. One of its major advantages is the relationship between aptitude scores and Occupational Aptitude Patterns and job classifications used in the Dictionary of Occupational Titles. The GATB is used extensively in State Employment and Service offices and is available to nonprofit organizations engaged in counseling. Formal training is required prior to test administration. This test may not be appropriate for many disadvantaged persons due to its required sixth grade reading level. In addition much of the validity studies have been on semiskilled occupations and not technical jobs. The test may be obsolete, ie., not responsive to current occupations.

1. Title of test: Multiple Aptitude Tests (MAT)

2. Authors: David Segel and Evelyn Raskin

3. Publisher: California Test Bureau

4. Population for which designed: Grades 7-13

5. Purpose: The MAT was designed to provide information concerning relative strengths and weaknesses in four scholastic aptitudes in an attempt to aid counselors who assist students with problems involving educational and vocational decisions.

6. Administration: Total administration time for the MAT is between 175 to 220 minutes. It is recommended that the complete battery be given in two or three sessions. Separate answer sheets may be used. The tests themselves come in four separate booklets, each containing the tests for one factor. If desired, parts of the battery can be selected for administration.

7. Content: This battery consists of nine tests: word meaning, paragraph meaning, language usage, routine clerical facility, arithmetic reasoning, arithmetic computation, applied science and mechanics, spatial relations--two dimensions, and spatial relations--three dimensions. These nine scores are combined to form four basic factors: verbal comprehension, perceptual speed, numerical reasoning, and spatial visualization.

8. Scoring: Scoring may be either done by hand or machine. Fourteen scores are reported: a score for each of the nine tests, 4 factor scores and a scholastic potential score. Raw scores are transformed into percentiles or standard scores. An extended profile facilitates the visual presentation of test scores.

9. Norm group: Fall norms were based on approximately 11,000 cases widely dispersed across the country. Percentiles and T scores are given for both males and females for each grade 7-13. In addition, differential percentile norms, by sex, for grades 7-9 and 10-12 are provided for comparing an examinee's aptitude scores with others of similar intelligence.

10. Reliability: Reliability coefficients are provided by each of the nine tests for each sex by grade, (7-13). The routine clerical facility test reliability index was based on test-retest scores while all other coefficients were calculated by Kuder-Richardson formula 21. The average reliabilities of the separate tests range from .72 to .92. The reliabilities of the four factor scores range from .91 to .95.

11. Validity: Correlations of each test in the battery with a number of other widely used intelligence and scholastic aptitude tests are reported. In addition, correlations of separate test scores with school marks for males in 16 high school subjects and for females in 15 school subjects are given. The technical report reveals three chapters on validity--construct, concurrent and predictive validity.

12. Strengths and Weaknesses: The MAT is a carefully constructed and standardized test. The mechanics for administration, scoring, and interpretation are well worked out. Individual test scores and factor scores have satisfactory reliability for use in individual counseling. Only one form of the test is available which presents retesting problems.

1. Title of test: Nonreading Aptitude Test Battery (NATB)

2. Authors: United States Employment Service

3. Publisher: United States Government Printing Office

4. Population for which designed: Disadvantaged individuals who lack the literacy and test-taking skills necessary to complete the GATB.

5. Purpose: The NATB is the nonreading version of the GATB and measures the same nine vocational aptitudes.

6. Administration: Groups of up to six may be administered the NATB at a time. Items from the vocabulary test are read aloud by the test administrator. Enlargement of pages in the test booklets are used to aid the test examinee in locating and marking the answers in their booklets. Each test, except one, is printed in a separate booklet. Total time required for testing is about 200 minutes.

7. Content: The NATB contains 14 tests which yield measures of the same nine aptitudes as the GATB. Items contained in the pencil-and-paper booklets are similar to those found in the GATB except there are no arithmetic problems and the vocabulary items are administered orally.

8. Scoring: The NATB may be scored by hand or machine. Raw scores are converted and combined to obtain measures of the same nine aptitudes found in the GATB. Occupational Aptitude Pattern norms are used.

9. Norm groups: Normative data was obtained and standardized on 841 high school students. NATB and GATB converted scores were equated using regression methods.

10. Reliability: The manual contains no reliability data.

11. Validity: No validity studies have been published.

12. Strengths and weaknesses: The NATB does not have the technical rigor that the GATB has and should be used with extreme caution. The NATB can be used to assess aptitudes of the disadvantaged but should not be used for selection or placement because of lack of direct job validation.

1. Title of test: The Harrington/O'Shea System for Career Decision-Making (CDM)

2. Authors: Thomas F. Harrington and Arthur J. O'Shea

3. Publisher: Chronicle Guidance Publications, Inc.

4. Population for which designed: Grades 8-14 and adults

5. Purpose: The CDM was developed to "simulate the best career counseling techniques," by providing a "vocational interest inventory with a sound theoretical base which is self-administered and self- interpreted.

6. Administration: Total administration time for this interest inventory is approximately 40 minutes. There are three systems for the CDM: System I - Interpretive Report; System P - Profile Report; and System S - Self Scoring. Systems I and P are scored and reported by a scoring service while System S is self scoring. Separate answer sheets are provided with the reusable booklet edition.

7. Content: The CDM is a shorter version of the Vocational Preference Inventory. It provides interest information in 6 areas: arts, business, clerical, crafts, scientific, and social.

8. Scoring: Students self-rate themselves for career cluster, job values, and abilities. The six raw interest scores are used to identify three or more occupational areas for intensive career exploration from among 18 career clusters (artwork, clerical work, customer services, data analysis, education work, entertainment, legal, literary work, management, manual work, math-science, medical-dental, music work, personal service, sales work, skilled craft, social services, and technical) and questions in five areas (abilities, future plans, job values, occupational preferences, and subject preferences).

9. Norm groups: The normative sample appears to be relatively balanced compared to the 1970 Census figures. Many sub-norm groups are presented for comparison.

10. Reliability: Test-retest correlations over a 30-day period range from .75 to .94. Alpha coefficients for the six interest scales range from .84 to .90.

11. Validity: No predictive validity information is presented. Concurrent validity is based on the relationship to the Vocational Preference Inventory.

12. Strengths and weaknesses: The CDM is relatively easy to administer score and interpret. The interpretative printout is very thorough and provides more data than counselors are likely to provide their

clients. Sex bias has been eliminated by presenting all occupational titles in gender neutral terms, and by using a reporting system based entirely on client responses independent of sex.

1. Title of test: Kuder General Interest Survey (GIS), Form E

2. Authors: F.G. Kuder

3. Publisher: Science Research Associates, Inc, 1964

4. Population for which designed: Grades 6-12, high school students with a limited vocabulary

5. Purpose: The GIS Form E is a revision and downward extension of the Kuder Preference Record--Vocational Form C. It was designed to measure vocational preferences only as cluster areas rather than specific occupational choice for individuals with a sixth-grade reading level.

6. Administration: This pencil-and-paper test is untimed but takes approximately one hour to administer.

7. Content: The GIS consists of 552 statements arranged into 184 triads. It is a forced-choice test where the subject selects the statement or activity liked "most" and the one liked "least" in each triad.

8. Scoring: The GIS may be either hand or machine scored. There are ten occupational scales: outdoor, mechanical, computational, scientific, persuasive, artistic, literary, musical, social service, and clerical. In addition there is a verification scale. Raw scores are converted to percentiles, and these percentiles scores are used to develop a test profile which aids in the interpretation of the results.

9. Norm groups: Descriptions of the sampling procedures and nature of the standardization sample are clearly presented in the manual. It appears that the normative groups are a fairly representative sample.

10. Reliability: Reliability coefficients are reported in terms of stability data and internal consistency measures. K-R reliabilities for all scales are above .70. Stability data for 328 girls and 311 boys in sixth or seventh grade and retested four years later provide average correlations for all scales for boys to be .50 and .43 for girls.

11. Validity: No predictive validity is reported. Face and content validity rests on job satisfaction studies based on its predecessor the Kuder Preference Record-Vocational.

12. Strengths and weaknesses: As an instrument for group counseling with junior high school students it lacks the stability of results, interpretation of the profile is different and the contents of many items has a middle class flavor. However as

an aid to counseling high school students, the GIS is as good as anything currently available and considerably better than most.

1. Title of test: Kuder Occupational Interest Survey (KOIS) Form DD

2. Authors: F. G. Kuder

3. Publisher: Science Research Associates, Inc., 1964

4. Population for which designed: High school students, college students and adults.

5. Purpose: The KOIS, Form DD which replaces the Kuder Preference Record-Occupational Form D was designed to measure occupational and educational interests.

6. Administration: Total administration time for this untimed pencil-and-paper test is approximately 30 to 40 minutes. The test items are printed on the answer sheet with no separate test booklet required.

7. Content: The KOIS consists of 300 items arranged into 100 triads. It is a forced-choice test where the subject selects the one statement that he prefers most and the one he likes least.

8. Scoring: The KOIS must be machine scored by the publisher. Each examinee receives a profile sheet which aids in the interpretation of the results. Theres are 106 scales for men including 77 occupational clusters and 27 college majors. There are 84 scales for women including 57 occupations and 27 college majors. There is considerable overlap between men's and women's scales.

9. Norm groups: Each scale was developed on separate groups of employed workers or students. The occupational scales were normed on employees engaged in these occupations. All groups are clearly described in the manual.

10. Reliability: Test-retest reliabilities over a two-week period are reported as .93 and .96.

11. Validity: Data reported in the KOIS manual demonstrates respectable concurrent validity. However, no data are reported on the predictive validity of the KOIS.

12. Strengths and weaknesses: The KOIS is carefully constructed and covers a wide variety of occupations and college major interests for both men and women. It provides an interpretative leaflet for each examinee. The major disadvantage of the test is that it can only be scored by the publisher.

1. Title of test: Minnesota Vocational Interest Inventory (MVII)

2. Authors: Kenneth E. Clark and David P. Campbell

3. Publisher: The Psychological Corporation, Inc.

4. Population for which designed: High school students not aspiring professional vocations.

5. Purpose: The MVII was designed to measure interests of non-college bound youth considering occupations at the semi-skilled and skilled level.

6. Administration: This non-timed pencil-and-paper test requires approximately 45 to 50 minutes to administer. The examinee answers items in individual test booklets.

7. Content: The MVII consists of 474 items arranged in 158 triads. The examinee is required to indicate the activity he likes most as well as the one he likes least.

8. Scoring: Machine scoring is available and advised. Twenty-one skilled occupation scales and nine homogeneous occupational cluster scales. Each score represents the percent of agreement between the examinee and those composing the scoring group. Each standard score on the profiles is accompanied by a shaded area representing the range of scores for the middle third of the normed group.

9. Norm groups: Norms were developed on employed workers in 21 specific occupations and a tradesmen-in-general group. A number of the samples were less than 150 subjects generally located in the Minneapolis-St. Paul area.

10. Reliability: Test-retest coefficients over a 30 day period for 98 Minnesota high school students ranged from .64 to .88 with a median reliability of .82 for the occupational scales, and from .62 to .87 with a median reliability of .84 for the area scales.

11. Validity: One type of validity reported is the percent of overlap between the criterion group and the tradesmen-in-general. Generally the instrument is able to differentiate between the tradesmen -in-general group and the individual occupation.

12. Strengths and weaknesses: This instrument is the most appropriate device for measuring the interests of skilled workers. The MVII does not appear to be as fakable as some other interest inventories. It is easy to administer and score with good quality and format. However, standardization is inadequate and more reliability and validity studies are needed.

1. Title of test: Picture Interest Inventory (PII)

2. Author: Kurt P. Weingarten

3. Publisher: California Test Bureau

4. Population for which designed: Persons who are illiterate in English.

5. Purpose: The PII is "designed to help an individual determine the pattern of his occupational interest, and at the same time indicate to him those specific occupational fields which are career possibilities based on interest."

6. Administration: Total administration time for this non-timed pencil-and-paper test is approximately 20 to 30 minutes. Items are answered on a separate answer sheet.

7. Content: The PII is a two part pencil-and-paper test which contains pictures of men performing various tasks. Part I is composed of 53 items, each containing three illustrations from which the examinee selects the one he likes most and the one he likes least. Part II is composed of 30 illustrations which the examinee indicates if he likes or dislikes each illustration.

8. Scoring: The PII may be either hand or machine scored. It is scored in six fields of occupational interest: (1) interpersonal service, (2) natural, (3) mechanical, (4) business, (5) esthetic, and (6) scientific. There are three additional scales: (1) verbal, (2) computational, and (3) time perspective. The raw scores are converted to percentiles and plotted.

9. Norm groups: The norming group consisted of 1,000 junior and senior high school and college students in 16 states. No description of the sample was given.

10. Reliability: Test-retest reliabilities coefficients for the nine scales based on a group of 80 eighth grade students and 85 twelfth grade students were generally in the .80's.

11. Validity: Concurrent validity was assessed using correlations with the Strong Vocational Interest Blank and the Kuder. No predictive validity was given.

12. Strengths and weaknesses: Because the inventory requires no reading and the illustrations are clear it can be used for persons who are illiterate in English. However, all illustrations contain only men which may disturb female clients.

1. Title of the test: Strong Vocational Interest Blank (SVIB)

2. Authors: Edward K. Strong

3. Publisher: Stanford University Press

4. Population for which designed: Seventeen-year olds and over

5. Purpose: By providing an index of similarity between a person's interests and those of successful men and women in a variety of occupations, the SVIB was designed to guide an individaul into areas where he is likely fo find job satisfaction.

6. Administration: The SVIB is a pencil-and-paper that is group administered. Although not timed, it takes approximately 35 to 40 minutes to administer. Separate answer sheets are used.

7. Content: The SVIB consists of 339 items and provides separate forms for men and women. The items are both vocational and avocational, requiring the examinee to respond to items by means of a three-element choice: like, dislike, or indifferent. The items are listed under such topics as: (1) occupations, (2) school subjects, (3) amusements, (4) activities, (5) types of people and everyday activities, and (6) a quasi-personality inventory in which the examinee rates his abilities and characteristics.

8. Scoring: Scoring may be done by hand or machine, but machine scoring is recommended. The men's form provides 22 basic interest scales, 54 occupational scales and 8 non-occupational scales. The women's form contains 19 basic interest scales, 58 occupational scales and 4 non-occupational scales. Final scores are converted to T scores and then presented in letter grades A through C indicating the percent of agreement between the examinee and the responses of a particular scale.

9. Norm groups: Separate occupational groups were used for each scale and compared with results from a men-in-general group or a women-in-general group. These samples are clearly defined in the manual.

10. Reliability: Median-scale test-retest correlations range from .56 (bankers tested over 30 years) to .91 (college sophomores tested after two weeks and young adults tested after 30 days).

11. Validity: Evidence of the validity of the SVIB was obtained primarily from longitudinal studies. Generally the SVIB displays substantial predictive validity of occupational choice.

12. Strengths and weaknesses: This inventory has a long history of use, has been carefully constructed and standardized, and displays substantial reliability and predictive validity of occupational

choice. However, most of the occupations covered are of a professional or semi-professional nature and thus may not be satisfactory for clientel seeking skilled positions. Because of the large numbers of occupational keys, hand scoring is almost out of the question.

1. Title of test: Wide Range Interest-Opinion Test (WRIOT)

2. Authors: Joseph F. Jastak and Sarah R. Jastak

3. Publisher: Guidance Associates of Delaware, Inc.

4. Population for which designed: Grades Kgn-12 and adults.

5. Purpose: The WRIOT was designed to provide measures of occupational interest for persons not fluent in English or unable to read.

6. Administration: Administration of the WRIOT is straightforward and takes between 40 and 50 minutes to complete. The instructions specifically encourage the examinee to disregard sex stereotypes, income, prestige and social pressures. Separate answer sheets must be used.

7. Content: The WRIOT contains line drawings of people doing things, primarily occupation, but a few leisure activities. These drawings are arranged in triads to be judged most and least liked.

8. Scoring: Answer sheets may be either hand scored or machine scored. The WRIOT provides 25 scores: 18 occupation interests (art, literature, music, drama, sales, management, office work, personal service, protective service, social service, social science, biological science, physical science, number, mechanics, machine operation, outdoor athletics) and 7 vocational attitudes: (sedentariness, risk, ambition, chosen skill level, activity by sex, agreement, and interest spread). Machine scored answer sheets provide a profile with a line of pluses indicating T scores over 50, and a line of minuses for scores of less than 50.

9. Norm groups: Norm groups include 15 percent from minorities and are available for adults, 10th and 11th graders, and 8th graders separately by gender.

10. Reliability: Split-half reliability coefficients on a group of 150 males and 150 females were consistently above .82. Grade or age levels on which reliability data is based is not reported.

11. Validity: Correlations between the WRIOT scores and another pictorial interest inventory are provided. These correlations are high.

12. Strengths and weaknesses: The primary strength of the WRIOT is its adaptability for persons fluent in English or unable to read. However, many of the drawings are stereotypic in nature. Although reliabilities appear to be adequate, no discription of the group on which the reliability data was based is reported.

1. Title of test: California Psychological Inventory (CPI)

2. Author: Harrison G. Gough

3. Publisher: Consulting Psychologists Press, Inc.

4. Population for which designed: Developed on "normal" persons and is intended to be used with persons not having severe psychological problems.

5. Purpose: The CPI was designed to develop "descriptive concepts which possess broad personal and social relevance." It was also intended to provide "brief, accurate, and dependable subscales" for the assessment of many personality variables.

6. Administration: A group can be administered this pencil-and-paper test in between 45 and 60 minutes. The CPI is not a timed test. Responses are marked on separate answer sheets.

7. Content: The CPI consists of 480 items to be answered "true" or "false." About one-half of the items have been taken from the Minnesota Multiphasic Personality Inventory (MMPI).

8. Scoring: Scoring may be done by hand or machine. The CPI provides scale scores on the following 18 factors: (1) dominance, (2) capacity for status, (3) sociability, (4) social presence, (5) self-acceptance, (6) sense of well-being, (7) responsibility, (8) socialization, (9) self-control, (10) tolerance, (11) good impression, (12) communality, (13) achievement via conformance, (14) achievement via independence, (15) intellectual efficiency, (16) psychological mindedness, (17) flexibility, and (18) feminity.

9. Norm groups: Norms are available for males and females with over 6,000 cases in each group. No additional descriptive information is available on this normative group.

10. Reliability: Test-retest reliability coefficients for high school students over a year interval averaged .65 for males and .68 for females. Retest reliabilities for an adult group over a one to three week interval averaged about .80.

11. Validity: Validity studies include correlations with other personality tests, correlations with ratings and difference in mean scale scores between two groups known to be different in the value measured by the CPI.

12. Strengths and weaknesses: The CPI is widely used as a measure of personality assessment. It is relatively easy to administer, technically adequate and easy to interpret. However, because the norms were developed from "normal" populations, the use of the instrument with disadvantaged and minority groups may be somewhat limited.

1. Title of test: Edwards Personal Preference Schedule (EPPS)

2. Author: Allen L. Edwards

3. Publisher: The Psychological Corporation

4. Population for which designed: The EPPS was developed for college students and adults.

5. Purpose: The EPPS was developed to provide "quick and convenient measures of a number of relatively independent normal personality variables."

6. Administration: Total testing time required for this group-administered pencil-and-paper test is between 40 to 55 minutes. The test is not timed. Responses are marked on separate answer sheets.

7. Content: The test is composed of 225 forced-choice items designed to assess the relative strengths of the following 15 manifest needs: (1) achievement, (2) deference, (3) order, (4) exhibition, (5) autonomy, (6) affiliation, (7) intraception, (8) succorance, (9) dominance, (10) abasement, (11) nurturance, (12) change, (13) endurance, (14)heterosexuality, and (15) aggression. Each item contains a statement representing one need paired with a statement representing another need. The statement pairings are supposed to be controlled for social desirability.

8. Scoring: Scoring may be done by hand or machine. Raw scores for each of the 15 scales are converted to percentiles. For ease of interpretation, these percentiles are presented in profile fashion.

9. Norm groups: The EPPS was normed on a college sample of 760 males and 749 females and an adult sample of 4,031 males and 4,932 females. The representativeness of the adult sample is questionable.

10. Reliability: Internal consistency reliability coefficients range from .60 to .87 with a median of .78. Test-retest reliability coefficients over a one-week interval range from .74 to .87 with a median of .83.

11. Validity: Although the EPPS has been used extensively in research, consistent validity data is lacking, except for a few correlations with other personality tests.

12. Strengths and weaknesses: The EPPS is very adequate if used for counseling essentially normal students as it was designed for. However, because of the high reading level required, successful completion by disadvantaged clients may be impeded.

1. Title of test: Minnesota Multiphasic Personality Inventory (MMPI)

2. Authors: Starke R. Hathaway and J. Charnley McKinley

3. Publisher: The Psychological Corporation

4. Population for which designed: Clients 16 years or older with a sixth grade reading level.

5. Purpose: The MMPI "is designed to provide an objective assessment of some of the major personality characteristics that affect personal and social adjustment."

6. Administration: The MMPI is available in two formats: the Individual Form and the Booklet Form. The Individual Form consists of a box of 555 small cards with individual statement printed on them. The examinee sorts these cards into true or false piles. The Booklet Form is a pencil-and-paper test containing the same 555 statements. These items are marked true or false on a separate answer sheet. Although the test is untimed, the time required to administer the test ranges from 30 to 90 minutes.

7. Content: The 555 true-false statements are designed to assess personal characteristics, personality traits, feelings, habits, etc. The instrument contains ten clinical scales:. (1) hypochondriasis, (2) depression, (3) hysteria, (4) psychopathic deviate, (5) paranoia, (6) psychasthenia, (7) schizophrenia, (8) hypomania and (9) masculinity-feminity.

8. Scoring: The MMPI may be scored by hand or machine. Machine scoring is recommended because of the number of scoring keys and the availability of computer interpretation. Raw scores for each scale are converted with appropriate norm tables to T scores. Profiles are also developed using the scale scores.

9. Norm groups: The MMPI was developed by contrasting scores of approximately 700 "normal" adults with 800 clinical studied adults with psychological abnormalities.

10. Reliability: Test/re-test reliability coefficients for individual scale scores ranged from .46 to .91, with most of the coefficients in the .70's.

11. Validity: Predictive validity was obtained by comparing MMPI results with clinical diagnosis. More than 60 percent of the cases were successfully predicted. There is an abundant supply of validation studies.

12. Strengths and weaknesses: The MMPI has a long history of being a valuable tool in the diagnosis of "abnormal" behavior. However it is rather lengthy to use as a screening test and graduate training in psychology and in the use of the MMPI is required before the examiner can administer the test. Some items may be considered potential problems of invasion of privacy.

1. Title of evaluation system: Comprehensive Occupational Assessment and Training System (COATS)

2. Publisher: Prep., Inc.

3. Population for which designed: Originally designed for use in Manpower programs and secondary education guidance programs, the COATS has been slightly modified to serve a rehabilitation population.

4. Purpose: The COATS is the most comprehensive evaluation system presently available for use in educational and rehabilitation settings. The system is logically consistent, well designed, and based on a wide range of research studies.

5. Utility: A wealth of occupational information is given to client for vocational exploration. The COATS also provides vocational recommendations for both individual jobs and groups of related jobs.

6. Administration: The COATS System consists of four components designed to give the evaluator a complete picture of the client. These four components include: (1) a job matching system, (2) an employability attitudes system, (3) a work samples system and (4) a living skills system. Each component is independent and can be administered in any order. The ten work samples may be administered in any order and some need not be administered at all. All components except the work samples can be administered to small groups. If all ten work samples are given, administration time for this component takes from 18 to 40 hours. The remaining three components take an estimated 10 to 20 hours to administer. Training in the system is not required, but is available for a duration of three to five days.

7. Content: The job matching system matches the client with job and training opportunities based on the client's preferences, experiences, and capabilities. The employability attitudes system provides 25 "real life" situations and compares the clients' attitudes and behaviors with the attitudes seen important by the employer. The work sample system contains ten work samples: barbering-cosmetology; clerical-office; drafting; food preparation; medical services; metal construction; sales; small engine; travel services; and wood construction. The living skills system presents 18 "adventures" to evaluate literacy skills and knowledge skills.

8. Scoring: The only timed components are the work samples. The client may time himself or may be timed by the evaluator. In addition to the time score all work sample results are checked against carefully defined scoring criteria and rated on a four point rating scale. Emphasis is placed on the quality of the sample rather than the time required to finish the sample.

9. Norm groups: Only student time norms are available for the work samples. The norming procedures used for the remaining three components appear to be adequate.

10. Reliability: Reliability data appearing in each of the four instructor's manuals and in separate research publications indicate that the reliability of the four components is adequate.

11. Validity: Several different methods were used to determine the validity of the COATS. Validity data is available in all four instructor's manuals.

12. Strengths and weaknesses: The COATS is the most comprehensive evaluation system presently available for use in educational settings. It is logically consistent, well designed, and based on a wide range of research studies. Each component can be used independently. A great emphasis is placed upon the client using the results to plan and change his own behavior. Potential problems may develop with clients having less than an eighth grade reading level. The costs for the entire system is somewhat prohibitive. The complete cost for each component not including training is as follows:

job matching system	-	approximately $2,000
employability attitudes system	-	approximately $1,250
work samples systems	-	approximately $7,500
living skills system	-	approximately $1,100

In addition the necessary audio-visual equipment costs between $400 and $500.

1. Title of evaluation system: Micro-TOWER

2. Publisher: ICD Rehabilitation and Research Center

3. Population for which designed: The system is primarily aimed at a general rehabilitation population, but it can also be used with special education students, the disadvantaged and adult offenders.

4. Purpose: Micro-TOWER is designed as a group aptitude battery that uses work sampling techniques as the assessment method. The system claims to measure seven of the nine aptitudes that are used in the Worker Trait Group arrangement of the DOT.

5. Utility: Each work sample is designed to make clients aware of what jobs are related to the aptitudes being measured by the work sample. In making recommendations, the evaluator would match clients' aptitudes with those required by the Worker Trait groups. Thus, the system can be used to (1) produce a final report that is designed for the referral agency, or (2) as the first step in an extended evaluation.

6. Administration: No preliminary screening is required prior to the administration of Micro-TOWER. The work samples do not follow a given sequence. The initial step of administration is a presentation of a series of occupational photos illustrating jobs requiring the skills assessed by the work sample. An untimed learning/practice period includes taped instructions, visual illustrations, evaluator demonstrations, and an opportunity for clients to practice. Once the evaluation period begins, the clients work entirely on their own. After completion of the task, clients fill out a self-report form rating their interest and perceived ability. Total testing time is approximately 15 hours. Training in the system is not required but strongly recommended. The training session usually takes two to three days.

7. Content: There are 13 work samples divided into 5 groups of general aptitudes: motor, spatial, clerical perception, numerical, and verbal. The work samples are grouped according to the five aptitudes areas and are individually packaged.

8. Scoring: The score for each work sample is the number of correct responses during a specified time. To insure the accuracy of the timing interval each period is timed through the use of a cassette tape.

9. Norm groups: Norms are available for 19 different groups, including the disadvantaged. In addition, ICD will provide assistance in the development of local norms.

10. Reliability: Reliability coefficients based on test-retest, alternate forms, and internal consistency estimates range from .74 to .97.

11. Validity: Intercorrelations of the work sample provide data for content validity. Correlations are also reported with faiters from the General Aptitude Test Battery (GATB)

12. Strengths and weaknesses: The Micro-TOWER can be administreed to a group in a fairly short time thus making maximum use of the evaluator's time. In addition, the system provides accupational information relative to each woek sample. Adminstration conditions are carefrully controlled with the cassette tapes providing instructions as well as timing intervals. One primary problem is the lack of theorough behaviorial observational materials. The cost of the Micro-TOWER system depends on the number of clients being tested in the group. The cost of the syytem including the training in the use of the system ranges form approximately $5,000 for a group of four to approximately $13,000 for a group of thirty.

1. Title of evaluation system: Philadelphia Jewish Employment and Vocational Service Work Sample System (JEVS)

2. Publisher: U.S. Department of Labor

3. Population for which designed: The test was originally designed for the disadvantaged, the system is now being adapted for the disabled.

4. Purpose: The JEVS system is a highly standardized and well integrated procedure for client evaluation based on ten of the DOT Worker Trait Groups. The system emphasizes the accurate observation and recording of work behaviors and performance factors.

5. Utility: Because the work samples tend to be abstract, vocational exploration is limited. Vocational recommendations are highly related to the DOT and are geared for both training and job placement. For optimal counselor uses, counselor familiarity with the DOT is necessary.

6. Administration: The sequence of administration is progressive from easiest to hardest. The time to complete the entire system is about 6-7 days. The oral and demonstration methods are used. A two week training session is required to operate the system and is available from the publisher.

7. Content: The system contains 28 work samples arranged in 10 worker trait groups. Each work sample is individually packaged. The offset manual with photographs contains complete system details.

8. Scoring: The client used a time clock for each work sample. Most work samples use a random check of items comparing with the standards. The time results are rated on a three-point scale.

9. Norm groups: The system was normed on 322 clients, mainly young black males. No industrial norms are available.

10. Reliability: No published data about reliability are available.

11. Validity: Research by Nadolsky (1973) concludes that the system is valid for evaluation of immediate employment potential.

12. Strengths and weaknesses: The major problems with the system appear to be the abstract nature of many of the work samples which hinders vocational exploration, limited evaluation feedback to the client, and the lack of job information presented to the client. However, the system is perhaps best used when a thorough evaluation of the client's potential is desired.

The total cost of $6,140 includes all work samples and forms, shipping, tuition for training one person in Philadelphia and two site visits.

1. Title of evaluation system: Singer Vocational Evaluation System (Singer)

2. Publisher: Singer Education Division

3. Population for which designed: The target group is not specified.

4. Purpose: The Singer system presently consists of 20 work samples that provide the opportunity to evaluate a client for many job areas--mostly in the skilled trades.

5. Utility: An extensive amount of occupational information is provided to the client, each work sample contains an introduction to some jobs related to the work sample. The major emphasis is on orientation to job training. The final report is aimed for the counselor.

6. Administration: The order of administration is left to the discretion of the evaluator, and the client is extensively involved in the evaluation process. The time required to complete all 20 work samples is estimated to be over three weeks. All instructions are given using audio-visual tools. Work samples may be repeated if desired. No special training is required but the training is still available.

7. Contents: There are 20 work samples in the system: (1) Sample making; (2) Bench assembly; (3) Drafting; (4) Electrical wiring; (5) Plumbing and pipe fitting; (6) Carpentry; (7) Refrigeration, heating, and air conditioning; (8) Soldering and welding; (9) Office and sales clerk; (10) Needle trades; (11) Masonry; (12) Sheet metal; (13) Cooking and baking; (14) Engine service; (15) Medical service; (16) Cosmetology; (17) Data calculation and recording; (18) Soil testing; (19) Photo lab technician, and (20) Production machine operating. Each work sample is independent and self-contained in a carrel.

8. Scoring: The client is timed by the evaluator and is rated on a five-point scale based on the completion time. In addition, all items are checked against carefully defined criteria and rated on a five-point scale. The emphasis in scoring is on the quality of the finished product.

9. Norm groups: Some work samples were normed on more than 100 individuals. No industrial norms are available.

10. Reliability: No data on reliability are available.

11. Validity: No data on validity are available.

12. Strengths and weaknesses: The Singer system provides an opportunity to evaluate a client for many skilled trades using 20 work samples. Interest measures and occupational information makes the client aware of a wide variety of jobs. These career exploration and occupation information functions are the strong points of the system. However, the system is not integrated into a functional whole and many of the procedures for using the system are not clearly presented. The cost for the 20 work samples, evaluation package, installation and orientation is approximately $23,000. Ten work samples cost approximately $13,000. No training is included.

1. Title of evaluation system: The Tower System (TOWER)

2. Publisher: Vocational Rehabilitation Administration

3. Population for which designed: Tower was designed for the physically and emotionally disabled.

4. Purpose: The TOWER system is the oldest complete work evaluation system and over the years has served as a model for the development of many work samples.

5. Utility: The client is exposed to many different training areas which are representative of a variety of jobs. Vocational recommendations are limited to jobs which are directly related to the work samples. The final report is aimed at the counselor.

6. Administration: The administration is progressive within the major areas; no client involvement procedures are specified in the manual. Oral explanation and demonstration are used. Training is required and available for three weeks. The average client takes three weeks to complete the entire system.

7. Content: The system contains 93 work samples arranged into 14 job training areas but are not individually packaged. The printed manual is bound in a looseleaf folder.

8. Scoring: The evaluator times the client and the results are rated on a five-point scale. All items are checked against carefully defined scoring criteria.

9. Norm groups: The system was normed on clients at the Institute for the Crippled and Disabled (ICD). Sample sizes or characteristics are not given.

10. Reliability: No reliability data available.

11. Validity: A seven city research study produced equivocal results.

12. Strengths and weaknesses: The system is very useful in evaluating clients for a small group of jobs. The lack of precise definitions for work performance factors, client behaviors and the lack of adequate norms are the major weaknesses of the system. The cost for three copies of all work samples and forms is $300 and training tuition is $150.

1. Title of evaluation system: Valpar Component Work Sample Series (VALPAR)

2. Publisher: Valpar Corporation

3. Population for which designed: Industrially injured workers.

4. Purpose: The VALPAR system was designed to provide a trait-and-factor approach based on task analysis.

5. Utility: There is little opportunity for vocational exploration associated with the work samples, no vocational recommendations can be made on the basis of one work sample. However, individual work samples can be easily incorporated into existing evaluation programs providing insight into skills specific to the work samples.

6. Administration: The order and number of work samples administered is left to the discretion of the evaluator. All instructions are oral and accompanied by demonstrations. Readministration of the work samples is encouraged. Practice trials are given. The manual does not state whether the client may receive assistance after the timing has started. Approximately 12 to 15 hours would be required to administer all 12 work samples. Training is, however, available and may take up to 10 days depending on the needs of the evaluator.

7. Content: Twelve work samples are contained in the system: (1) small tools (mechanical); (2) size discrimination; (3) numerical sorting; (4) upper extremity range of motion; (5) clerical comprehension and aptitude; (6) independent problem solving; (7) multi-level sorting; (8) simulated assembly; (9) whole body range of motion; (10) tri-level measurement; (11) eye-hand-foot coordination; and (12) soldering. Each work sample is self-contained. Each sample is to be used as an individual component and are not to be grouped as an evaluation system.

8. Scoring: Completion time is recorded in seconds for each portion of the work sample and the disassembly. The total time is converted to percentile norms. Each work sample is checked against well defined criteria and the number of errors for each part of the sample are recorded and totaled. The total number of errors is then converted to percentile scores. Emphasis is divided equally between quality and quantity.

9. Norm groups: Norms are available on clients, sheltered workshop employees, and employed workers.

10 Reliability: Most of the test-retest reliability coefficients obtained for most work samples are fairly high.

11. Validity: No validity data is available.

12. Strengths and weaknesses: The work samples are well designed and constructed and are relatively easy to administer and score. Because these are a group of independent work samples, rather than an evaluation system, no final report forms are used. These individual work samples can be easily incorporated into an existing evaluation program.

APPENDIX G

SELECTED REFERENCES ON TESTING

References

Botterbusch, K. F., A comparison of seven vocational evaluation systems. Menomonie, Wisconsin: Materials Development Center, 1976.

Botterbusch, K. F., A comparison of four vocational evaluation systems. Menomonie, Wisconsin: Materials Development Center, 1977.

Botterbusch, K. F., Tests and measurements for vocational evaluators. Menomonie, Wisconsin: Materials Development Center, 1973.

Buros, O. K., The 1938 mental measurements yearbook. New Brunswick, New Jersey: Rutgers University Press, 1938.

Buros, O. K., The 1940 mental measurements yearbook. Highland Park, New Jersey: The Mental Measurements Yearbook, 1941.

Buros, O. K., The third mental measurements yearbook. New Brunswick, New Jersey: Rutgers University Press, 1949.

Buros, O. K., The fourth mental measurements yearbook. Highland Park, New Jersey: Gryphon Press, 1953.

Buros, O. K., The fifth mental measurements yearbook. Highland Park, New Jersey: Gryphon Press, 1959.

Buros, O. K., The sixth mental measurements yearbook. Highland Park, New Jersey: Gryphon Press, 1965.

Buros, O. K., The seventh mental measurements yearbook. Highland Park, New Jersey: Gryphon Press, 1972.

Buros, O. K., The eighth mental measurements yearbook. Highland Park, New Jersey: Gryphon Press, 1977.

Buros, O. K., Tests in print. Highland Park, New Jersey: Gryphon Press, 1965.

Buros, O. K., Tests in print II. Highland Park, New Jersey: Gryphon Press, 1974.

Buros, O. K., Vocational tests and review. Highland Park, New Jersey: Gryphon Press, 1975.

Cottle, W. D., Interest and personality inventories. Boston: Houghton Mifflen, 1968.

Cronbach, L. J., Essentials of psychological testing. (3rd ed.) New York: Harper and Row, 1970.

Mechrens, W. A. and Lehmann, I. J., Standardized tests in education. New York: Holt, Rinehart, and Winston, 1968.

Noll, V. H. and Scannell, D. P., Introduction to educational measurement. (3rd ed.) Boston: Houghton Mifflin, 1972.

Thorndike, R. L. and Hagen, E. P., Measurement and evaluation in psychology and education. (3rd ed.) New York: John Wiley and Sons, 1969.

APPENDIX H

BIBLIOGRAPHY

BIBLIOGRAPHY

Borus, M. Indicators of CETA performance. Industrial & Labor Relations Review, 1978, 32 (1), 3-14.

Cluster indicators recommended for CETA assessment, grant reviews. Employment and Training Reporter, 1977, 8 (9), 215-217.

Illinois, Governor's Office of Manpower and Human Development. Final report on intake and assessment systems of CETA prime sponsors. Booz, Allen and Hamilton, Inc., 1977.

Indicators used to judge CETA program success found inadequate. Employment and Training Reporter, 1978, 10 (13), 194-195.

National Commission for Manpower Policy. CETA: An analysis of the Issues (Special Report No. 23). Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration, Office of Manpower Program Evaluation. Self-evaluation of CETA manpower programs: A guide for prime sponsors. Washington, D.C.: U.S. Government Printing Office, 1975.

U.S. Department of Labor, Employment and Training Administration, Office of Policy, Evaluation and Research. How to get started on evaluation: A field report and guide for CETA prime sponsors. Washington, D.C.: U.S. Government Printing Office, 1977.

U.S. Department of Labor, Employment and Training Administration. CETA prime sponsor management decisions and program goal achievement. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. Classroom training--The OIC approach: CETA program models. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. Intake and assessment: CETA program models. Washington D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. Job development and placement: CETA program models. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. On-the-job training: CETA program models. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. Supportive services: CETA program models. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. The implementation of CETA in eastern Massachusetts and Boston (R & D Monograph No. 57). Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. Work experience perspectives: CETA program models. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Department of Labor, Employment and Training Administration. New approaches to CETA training: An overview of the Title III national program for selected population segments (R & D Monograph No. 69) Washington, D.C.: U.S. Government Printing Office, 1979.

U.S. Department of Labor, Manpower Administration. CETA/SESA guide. Washington, D.C.: U.S. Government Printing Office, 1975.